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PERSONAL.

Mr. Walter Jones has been apointed City Engineer of Niagara Falls, N. Y.

Mr. Geo. W. Ames has been appointed City Engineer of Grand Rapids, Mich., with a salary of $2,400 per year.

Mr. Gustave A. Roullier, M. Am. Soc. C. E., of Flushing, N. Y., has been appointed Engineer in Charge of Water Supply for the Borough of Queens, New York city.

Mr. L. F. Lewis has been appointed City Commissioner of Baltimore, Md., with Messrs. O. W. Comet, F. S. Hancock and John S. Patterson as Assistant City Commissioners.

Mr. William L. Kenly, M. Am. Soc. C. E., Consulting Engineer of the Water Department, Baltimore, Md., has been appointed Chief Engineer of the same, to succeed Mr. Nicholas S. Hill, Jr.

Mr. Frederick H. Beach has been elected President; Mr. Charles E. McOmber, Vice-President; Mr. A. B. Paine, Secretary, and Mr. C. E. Lent, Philadelphia, Pa., Treasurer, of the Ballston Terminal R. R., Ballston, N. Y.

Mr. James Dredge, M. Inst. C. E. and Editor and one of the proprietors of London "Engineering," has had recently conferred upon him the title of Companion of the Order of St. Michael and St. George. Mr. Dredge was one of the English Commissioners to the Chicago Exposition in 1893.

Mr. H. L. Noyes, civil engineer, has severed his connection with the Buffalo Bridge & Iron Works, and has opened an office at 846 Ellicott Square, Buffalo, N. Y. He will make a specialty of the design and inspection of steel bridges and buildings, and will also represent the Pittsburg Testing Laboratory, Ltd., of Pittsburg, Pa.

Mr. Russell Sturgis, the editor of the "Dictionary of Architecture," to be published by the Macmillan Co., has selected Mr. William Paul Gerhard, Consulting Sanitary Engineer, to write the articles on plumbing, house drainage and kindred subjects for the dictionary. Mr. Gerhard has recently been elected an honorary corresponding member of the British Fire Prevention Committee.

The Canal Investigating Commission, which will investigate the work already done in enlarging and improving the Erie, Champlain and Oswego canals in New York state, has been appointed by Governor Black, and consists of Messrs. George Clinton, Buffalo; Darwin R. Jones, Brooklyn; Frank Brainerd, New York; William McEchron, Glens Falls; Smith M. Weed, Plattsburg; Franklin Edson, ex-Mayor of New York, and A. Foster Higgins, Chairman of the Harbor Committee of the New York Chamber of Commerce. The commission will investigate the expenditure of the $9,000,000 appropriated for canal improvements and such other matters in connection with the work as are in the judgment of the commission of public interest. The commission may employ counsel, experts, engineers and such other assistants as it may deem necessary.

Mr. Mordecai T. Endicott, C. E., U. S. N., M. Am. Soc. C. E., was appointed by the President on March 21, Chief of the Bureau of Yards and Docks, in the Navy Department, to succeed Rear Admiral E. O. Matthews, retired. Mr. Endicott was born in New Jersey in 1844, and was graduated as a Civil Engineer from the Rensselaer Polytechnic Institute, of Troy, N. Y., in 1868. He practiced his profession as a civil and mining engineer in the Pennsylvania coal regions, and on railway and bridge work in Connecticut and Ohio. In 1872 he became an assistant engineer on the first improvements at the League Island Navy Yard, in Philadelphia, and from there was transferred to the old Philadelphia Navy Yard. On July 13, 1894, he was commissioned a Civil Engineer, U. S. N., and later served in that capacity at the New London Naval Station, and at the Portsmouth, League Island, Norfolk and Port Royal Navy Yards. On April 4, 1890, he was called to the Navy Department as Consulting Engineer to the Bureau of Yards and Docks, and held that office at the time of his recent appointment. Mr. Endicott was also a member of the Nicaragua Canal Commission of 1895, and a member of the U. S. Armor Factory Board of 1897. He was made a Member of the American Society of Civil Engineers on April 7, 1877.

OBITUARY.

Mr. William J. Whitaker, civil engineer, of Pittsburg, Pa., died March 12, aged 30.

Mr. Arnold B. Holmes, electrical inventor, of Newton, Mass., died recently, aged 69.

Mr. David Demarest, one of the oldest railway contractors in the country, died March 19, at Newark, N. J., aged 84 years.

Mr. Allyn Cox, Secretary and Treasurer of the New York, Chicago & St. Louis R. R. and Secretary of the Beech Creek R. R., died suddenly March 18, at his office in New York city, aged 62. He entered the railway service in 1870, and was at one time Private Secretary to the President of the Canada Southern Ry. He was also Secretary and Treasurer of the Carthage & Adirondack Ry. He was a member of the Metropolitan Museum of Art and of the American Museum of Natural History. His brother, Mr. Charles F. Cox, is Treasurer of the Cleveland, Cincinnati, Chicago & St. Louis Ry. and Secretary and Treasurer of the Toronto, Hamilton & Buffalo Ry., with office in New York city.

Admiral Popoff, the inventor of the famous Popoff war ship, died at St. Petersburg, Russia, March 19. Taking the Ericsson "Monitor" as a model, he invented a curious circular iron-clad vessel, around the circumference of which were arranged twelve propellers, which could be worked separately, thus giving the vessel a movement in any direction desired. Upon the disk was a turret with a brace of heavy coast defense guns inside. This vessel attracted a great deal of attention at the time and became the subject of much expert controversy. With it, its defense, its striking power, its supposed advantage of being propelled quickly in any direction, Admiral Popoff thought to revolutionize naval warfare. The vessel, however, proved utterly unseaworthy.

Hon. Wheelock Graves Veazey, of Vermont, a member of the Interstate Commerce Commission from 1889 to 1896, died at Washington, D. C., March 22. Judge Veazey was born in Rockingham County, N. H., Dec. 5, 1835, and there passed his early life. He was educated at Phillips-Exeter Academy and Dartmouth College. He was admitted to the bar in Vermont in 1860, practising until the war broke out, when he was made captain in a volunteer Vermont regiment. He served with distinction at Gettysburg, and was a full Colonel when discharged. He was Judge of the Supreme Court of Vermont from 1878 till 1889, and succeeded Aldace F. Walker on the Interstate Commerce Commission in 1889, serving until 1896, when he resigned through ill-health. He leaves a widow and a son and a daughter.

Gen. Geo. W. Rains died at Newburg, N. Y., March 21. Gen. Rains was born in Craven County, N. C., in 1817. He went to the United States Military Academy at West Point, and was graduated in 1842. He was first assigned to the Engineer Corps, but was transferred to the artillery and assigned to the Fourth Regiment in 1843. The following two years he was Assistant Professor of Chemistry, Mineralogy, and Geology at West Point. During the Mexican War he served on the staffs of Gen. Scott and Gen. Pillow, and was brevetted Captain and Major for gallantry at Contreras, Churubusco, and Chapultepec. He served in the Seminole War, and in 1856, after being made Captain, resigned, to become part proprietor and President of the Washington Iron Works and Highland Iron Works, at Newburg, N. Y. When the rebellion broke out he followed the fortunes of his native State, and was given a commission as Colonel in the Confederate Army. He had charge of the erection and equipment of a powder mill at Augusta, Ga. He was made a Brigadier General in 1865. Two years later he accepted a position as Professor of Chemistry and Pharmacy in the medical department of the University of Georgia.

ENGINEERING SOCIETIES.

COMING TECHNICAL MEETINGS.

THE AMERICAN SOCIETY OF IRRIGATION ENGINEERS.
Mar. 25-26. Annual meeting, Denver, Colo. Secy., John S. Titcomb, 38 Jacobson Block, Denver, Colo.
INDIANAPOLIS ENGINEERING CLUB.
Mar. 26. Secy., Edson F. Folsom, Indianapolis, Ind.
WESTERN SOCIETY OF ENGINEERS.
Mar. 26. Illustrated lecture on "Mexico," Wm. J. Karner. Secy., N. L. Litten, Monadnock Block, Chicago, Ill.
CANADIAN SOCIETY OF CIVIL ENGINEERS.
Mar. 31. Secy., C. H. McLeod, 112 Mansfield St., Montreal, Can.
CHICAGO ELECTRICAL ASSOCIATION.
Apr. 1. Secy., J. R. Cravath, 825 Monadnock Block, Chicago, Ill.
TECHNICAL SOCIETY OF THE PACIFIC COAST.
Apr. 1. Secy., O. Von Geldern, 810 Market St., San Francisco, Cal.
THE ENGINEERS' CLUB OF PHILADELPHIA.
Apr. 2. Secy., L. F. Rondinella, 1122 Girard St., Philadelphia, Pa.
ENGINEERS' SOCIETY OF WESTERN NEW YORK.
Apr. 4. Secy., H. J. March, Library Bldg., Buffalo, N.Y.
CIVIL ENGINEERS' SOCIETY OF ST. PAUL.
Apr. 4. Secy., C. L. Annan, City Engineers' Office, St. Paul, Minn.
ENGINEERS' CLUB OF ST. LOUIS.
Apr. 6. Secy., Richard McCulloch, St. Louis, Mo.
AMERICAN SOCIETY OF CIVIL ENGINEERS.
Apr. 6. Secy., C. W. Hunt, 220 West 57th St., New York city.
DENVER SOCIETY OF CIVIL ENGINEERS.
Apr. 8. Secy., W B Lawson, 36 Jacobson Bldg, Denver, Colo.
ST. LOUIS RAILWAY CLUB.
Apr. 8. Secy., H. H. Roberts, 511 Commercial Bldg., St. Louis, Mo.
MONTANA SOCIETY OF ENGINEERS.
Apr. 9. Secy., Albert S. Hovey, Helena, Mont.
ENGINEERS' CLUB OF KANSAS CITY.
Apr. 11. Secy., F. W. Tuttle, Baird Bldg.,Kansas City,Mo.
LOUISIANA ENGINEERING SOCIETY.
Apr. 11. Secy., J. F. Coleman, 712 Union St., New Orleans, La.
NORTHWEST RAILWAY CLUB.
Apr. 12. Secy., T. A. Foque, Soo Line, Minneapolis, Minn.
CIVIL ENGINEERS' CLUB OF CLEVELAND.
Apr. 12. Secy., Wm. H. Searles, Case Library Bldg., Cleveland, O.
NEW ENGLAND RAILROAD CLUB.
Apr. 13. Secy., Edward L. Jones, P. O. Box 1158, Boston, Mass.
ENGINEERING ASSOCIATION OF THE SOUTH.
Apr. 14. Nashville, Tenn. Secy., C. B. Wilson, Nashville, Tenn.
BROOKLYN ENGINEERS' CLUB.
Apr. 14. Secy., A. J. Provost, Jr., 191 Montague St., Brooklyn, N. Y.
ENGINEERS' CLUB OF COLUMBUS.
Apr. 16. Secy., M. S. Hopkins, 14½ N. High St., Columbus, O.
TECHNICAL CLUB OF OMAHA.
Apr. 18. Secy., J. Harry Lawrie, Omaha, Neb.
ENGINEERS' CLUB OF MINNEAPOLIS.
Apr. 18. Secy., H. E. Smith, 1620 S. E. 4th St., Minolis, Minn.
WESTERN RAILWAY CLUB.
Apr. 19. At Purdue University. Secy., F. M. Whyte, 225 Dearborn St., Chicago, Ill.
ENGINEERS' SOCIETY OF WESTERN PENNSYLVANIA.
Apr. 19. Secy., R. A. Fessenden, 410 Penn Ave.,Pittsburg, Pa.
ENGINEERS' AND ARCHITECTS' CLUB OF LOUISVILLE.
Apr. 19. Secy., Jas K. Zollinger, 16 Norton Bldg., Louisville, Ky.
BOSTON SOCIETY OF CIVIL ENGINEERS.
Apr. 20. Secy., S. E. Tinkham, City Hall, Boston, Mass.
WESTERN FOUNDRYMEN'S ASSOCIATION.
Apr. 20. Secy., A. Sorge, Jr., 1020 Monadnock Block, Chicago, Ill.
ENGINEERS' AND ARCHITECTS' ASSOCIATION OF SOUTHERN CALIFORNIA.
Apr. 20. Secy., Frank H. Olmsted, Los Angeles, Cal.
SOUTHERN AND SOUTHWESTERN RAILWAY CLUB.
Apr. 21. Secy., F. A. Charpiot, Macon, Ga.
ENGINEERS' CLUB OF CINCINNATI.
Apr. 21. Secy., J. F. Wilson, P.O. Box 333, Cincinnati, O.
NEW YORK RAILWAY CLUB.
Apr. 21. Secy., W. W. Wheatly, 168 Montague St., Brooklyn, N. Y.
FRANKLIN INSTITUTE.
Apr. 26. "The Multiple Unit System of Electric Railways." Frank J. Sprague. Secy., Wm. H. Wahl, 15 S. 7th St., Philadelphia, Pa.
ILLINOIS STREET RAILWAY ASSOCIATION.
May 18. Annual meeting. Secy., C. K. Minary, Springfield City R. R., Springfield, Ill.
AMERICAN WATER-WORKS ASSOCIATION.
June, 14-15. Annual meeting Buffalo, N. Y. Secy., Peter Milne, 95 William St., New York city.

ENGINEERS' CLUB OF MINNEAPOLIS.—A meeting of this club was held on March 14. Mr. Howe read a paper on "Brick Paving,' which was followed by a paper entitled "Some Effects of Heating and Work on Iron and Steel," by Mr. Harry E. Smith.

STREET RAILWAY ACCOUNTANTS' ASSOCIATION OF AMERICA.—The second annual convention of this Association will be held in Boston, Mass., Sept. 6—9. Papers will be read and various blanks exhibited. The meeting will be at the same time as that of the American Street Railway Association.

SCRANTON ENGINEERS' CLUB.—A regular meeting of this club was held March 17. Prof. M. C. Hseng, Dean of the School of Mines, Pennsylvania State College, delivered a lecture on the "History and Development of Gold Mining; the Disposition of Claims, the Rights of Claim Holders and Mining Laws."

STATE ENGINEERS.—A meeting of the State Engineers of Colorado, Nebraska, Kansas, Utah and Wyoming was held March 7 at Cheyenne, Wyo., to consider the administrative problem arising out of the questions of water rights under the laws of the several states, as well as the consideration of uniform laws relating to irrigation and water rights in the states represented.

LOUISIANA ENGINEERING SOCIETY.—At the regular meeting of this society, held March 14, Mr. Thos. L. Raymond read a very interesting paper, entitled "The Best Method of Treating the Mouths of the Mississippi River." He favored the improvement of Southwest Pass, as it is the best suited for navigation, and after the removal of its bar by jetties it would afford an enduring waterway 1,200 ft. wide, not less than 35 ft. deep in any part of its channel.

BOSTON SOCIETY OF CIVIL ENGINEERS.—The annual meeting of this society was held March 16, with about 250 members present. Reports of the officers were read, followed by a lecture on "Road Construction" given by Mr. William E. McClintock of the Massachusetts Highway Commission. The following officers were elected to serve during 1898: Pres., Howard A. Carson; Vice-Pres., Alexis H. French; Secy., S. Everett Tinkham; Treas., Edw. W. Howe; Librarian, Frank L. Fales; Director, X. H. Goodnough.

ENGINEERING ASSOCIATION OF THE SOUTH.—The regular monthly meeting was held March 10 at Nashville. Hunter McDonald, Chief Engineer of the Nashville, Chattanooga & St. Louis Ry., presented a paper, entitled "Small Railway Culverts." Costs and efficiency of cast-iron pipe, clay pipe and brick culverts were treated. The writer advocated the use of circular brick culverts for culverts exceeding 3 ft. in diameter. He stated that in the past few years 3,997 ft. of brick culverts have been built ranging in diameters from 3 to 6 ft., and that as yet no failure has occurred.

Mr. Wm. Leftwich, Asst. City Engineer of Nashville, discussed the sewer system of Nashville. He gave a short historical sketch of the development of the present system, and data showing present costs of city sewer work.

WESTERN SOCIETY OF ENGINEERS.—At the meeting on March 16 a paper on "Mechanical Plants of Large Buildings" was read by Mr. Dankmar Adler, describing the power equipment necessary for the light, heat, and elevator service, and sometimes for the ventilation of large buildings. At the Auditorium there is an arrangement for cooling the fresh air in summer by passing it through a spray of brine, but it is rarely that the temperature of the hall itself can be lowered more than 2° or 3°.

A paper on "Improved Portland Cement," by Mr. John W. Dickinson, was then read, in which tables were given showing the superiority of certain American brands over some German brands.

ENGINEERS' CLUB OF ST. LOUIS.—The 469th meeting of this club was held March 16. The paper of the evening, by Mr. E. W. Sterne, was entitled "The Steel Frame of the St. Louis Coliseum," and treated of the roof which has lately been built over the Coliseum building in St. Louis. The paper gave a general description of the arches, the loads for which the strains were figured, and the grade of steel used in the construction. The details of the various members and the methods by which the expansion was taken care of were described.

After the discussion Prof. Johnson presented by title a paper by Mr. Carl G. L. Barth, entitled "Investigation of Columns."

Mr. Crosby called attention to the fact that girders were being taken out of the Polytechnic Building which had been in service about twenty years, and stated that this was a good opportunity to observe the effect of rust upon this class of work. Richard McCulloch, Secy.

ENGINEERS' CLUB OF PHILADELPHIA.—At the regular meeting held Mar. 5, Mr. Benjamin Franklin presented a paper, entitled "The Inspection of Buildings." The paper referred to the good resulting from the Building Law of Philadelphia in correcting vicious forms of construction. In the discussion Prof. Edgar Marburg called attention to certain radically defective portions of the building law, and stated that the allowable unit load of timber should be fixed by law, leaving nothing for the judgment of the designer.

Mr. James Christie discussed the safe loading of timber, and gave 750 lbs. as an outside limit for fiber stress, further stating that cast-iron columns should no longer be permitted on first-class work. The building laws should also discourage the use of lime and encourage the use of cement mortars.

Mr. J. T. Richards advocated the formation of some high tribunal which should establish a standard of strength of materials. Sand used in making mortars and the connections of framed structures were items needing attention in the building laws.

WESTERN RAILWAY CLUB.—At the meeting of March 15, held at the Auditorium Hotel, Chicago, there was an interesting discussion on a paper by Mr. Gustave Giroux on "The M. C. B. Coupler," which paper gave special attention to the methods of drop-testing couplers. There was also some discussion as to the amount of air brake equipment required on freight trains in order to comply with the federal law. Mr. G. W. Rhodes (C. B. & Q. R. R.) thought a train having air brakes on the driving wheels, tender and one-fourth of the cars would meet the legal requirements, but he did not think any railway would stop when it had fitted a third or a quarter of its equipment. One of the greatest troubles in freight service is the breaking of trains, and with all cars equipped with brakes the men in the caboose would be notified of a break-in-two as promptly as the men on the front end. The Southern Pacific Ry. is having a number of cars equipped with train pipes only, so that trains can be made up in station order and not in air-brake order, and the C., B. & Q. R. R. is going to try the plan on 1,000 cars. In the discussion, however, a strong protest was made against any such plan, on the ground that the air-brake equipment is needed on all cars to meet service conditions, regardless of legal requirements. Later there was a discussion on some proposed changes in the Car Interchange Rules.

The club voted to accept an invitation to hold its April meeting at Lafayette, Ind., to inspect the mechanical laboratory at Purdue University, and also to visit the shops of the Chicago, Indianapolis & Louisville Ry.

ONTARIO LAND SURVEYORS.—The 6th annual meeting of this organization was held on March 8 at the Parliament buildings, Toronto. The usual routine business connected with the opening of a convention was transacted, and the first day was devoted to the President's address and various committee reports. On the second day Mr. A. W. Campbell, chairman of the engineering committee, presented a report in which he referred to the importance, from an engineering standpoint, of the proposed Mackenzie & Mann Ry., and also to the proposed railway from Toronto to James Bay. Continuing, he outlined the development of Canadian mines and water power during the past year, as well as municipal and civil engineering. The Committee on Topographical Survey presented its report through Mr. L. B. Stewart. This was a brief resume of what had been done during the year in that branch of science. Special stress was laid upon the need of a geodetic survey upon which to base the topographic survey.

The report of the Committee on Land Surveying was presented by Mr. M. Gaviller. In this it was stated that the large demand for mining location surveys, and supplying information for the development of the same, has afforded a promising opening to those who had taken the technical courses at any of the engineering colleges.

During the third day other reports were read, as were several papers. The bill proposed by the Canadian Society of Civil Engineers to regulate the practice of civil engineering in the Dominion of Canada and define what was meant by civil engineering was considered. During the three days' session the papers mentioned in our issue of March 10, 1898, were read. The election of officers for the ensuing year resulted in the following choice: Pres., P. S. Gibson, Willowdale; Vice-Pres., H. J. Bowman, Berlin; Secy.-Treas., H. J. Van Nostrand, Toronto.

AMERICAN SOCIETY OF CIVIL ENGINEERS.—At the regular meeting held March 16, a paper on "Movable Dams," by Mr. B. F. Thomas, M. Am. Soc. C. E., was read by the secretary. This was a very complete review of the subject, based upon researches made by the author when Assistant Engineer under the late Maj. James C. Post, U. S. Engineers. The various forms of movable dams in use here and abroad were treated historically and described in detail.

In the discussion which followed, it was stated that movable dams were well suited to the conditions existing on many rivers in this country, and that they were without doubt superior to solid dams where heavy and sudden freshets occurred. Shutter dams operated by hydraulic cylinders all supplied from the same pipe, using the pressure due to the head to operate pumps, or steam operated pumps, were worthy of serious consideration. Accumulators could be pumped up when the dam was raised, thus affording power to raise them at some other time. Ice might cause trouble, but the same possibility existed with all forms of movable dams.

It was also suggested that there was a tendency to run towards complicated forms of shutters and folding dams. The simplest was apt to be the best, and the old style shutters hinged so they could be released and allowed to swing down-stream, were after all an excellent form. They were first folded up-stream at low water, and when it was desired to raise the dam, catches were released, allowing the shutters to lift part way by their own buoyancy. In this way they would be caught by the current and raised to a vertical position where each shutter would be held by a chain which was released when desired by a suitable trip catch.

Capt. H. N. Chittenden, U. S. A., in a written discussion suggested that the term movable dam was too broad, and that the several types needed special and appropriate names. In their operation all work should be done by the power of the water, and owing to the danger to operators, especially at high water, hand work should be eliminated.

In a communication Mr. D. A. Watt stated that movable dams were quite extensively used abroad generally on small rivers, but there was no reason why they should be restricted to small rivers. He considered the needle type, using trestles 20 ft. apart, as possessing many advantages.

SOCIETY OF ENGINEERS, Columbia University.—A regular meeting of this society was held March 18 at Columbia University, New York city. Mr. Gano S. Dunn, Chief Engineer the Crocker Wheeler Electric Co., spoke upon the subject "New and Old Systems of Power Distribution in Factories." Heretofore most attention had been given to the saving of power, and nearly all claimed advantages in the use of electricity, for factories had stopped at this point. There were, however, many resultant effects of vastly more importance than the saving of power. Taking the average employee's pay as about $500 per year, the cost of power used per man in many cases is not more than 1% of his wages for the year. It is therefore apparent that a saving of even 25% of the operating power plays a very small part in the cheapening of manufacture. The other savings brought about are the proper ones to consider. Considering the item of power for the moment, the relative economy of electrical and mechanical shop transmission is often disputed. There is, however, no question that where power is to be distributed throughout a long shop, or where it must be transmitted from floor to floor or around angles, electricity is far superior to the ordinary systems employing belts, bevel gears and long lines of shafting. Engineers, in designing a shafting system, cannot figure upon an average load, for the shaft must be able to stand the greatest possible load due to all the machines starting or operating at once. This may seldom or never occur, and yet, year in and year out, that mass of shafting, belting, etc., must be operated. With an electric system the average load can be adopted, and even should an abnormal load fall upon the generators, the worst that can happen is to throw one or possibly several circuit breakers. Another factor playing quite an important part in shafting transmission is the settling of buildings, with a consequent distortion of shafting and increase in friction. If any out-buildings are to be supplied with power, quarter turn belts, bevel gears or rope drives are necessary, and the efficiencies of these devices are usually lower than those given by text books. The many belts necessary to drive machinery from a long line of shafting all exert a sidewise pull upon shafting increasing the friction of bearings and hence the waste power to a marked degree. One case illustrating very clearly where a large proportion of power goes in a mechanical transmission system came to light in a machine shop where a steam engine weighing 6,700 lbs., costing $1,000, was employed to drive 73,000 lbs. of pulleys, belts and shafting, costing $3,800. A large proportion of this mass could have been eliminated by the use of direct connected electric motors.

Mechanical distribution does not permit of the use of single tools unless the entire system is operating. In the average shop each tool will be in operation less than 75% of the time, yet the shafting must always be running ready for the instant use of all machines; also the shutting down of any one machine makes practically no difference in power cost. Loose pulleys frequently absorb large amounts of power. In the case of night work, resulting as a rule from a congestion of work about a few tools, the whole system of shafting and belting must be run in order that these few machines may be operated.

With the electrical system, employing small motors, operating one, two or three adjacent machines, it would be entirely different, the only power expended being that necessary to drive the congested machines. In the older methods it was necessary to lay out the building with the transmission system constantly in view. Buildings had to be heavier and ceilings higher to accommodate shafting and belting. With electricity, more floors could be built within the same height of walls, the shops could be lighter, buildings and machinery could be placed wherever convenient, and the power easily conveyed where needed.

The ease with which the speed of electrically driven machines can be controlled, either by changing armature voltage or field strength, and the added fact that the buildings can be lighted from the power mains tend to put the balance in favor of electricity.

In connection with some of the special applications of electricity to manufacture, Mr. Dunn stated that in the manufacture of silk the close speed regulation of motors, driving the looms directly, had reduced the amount of spoiled material to a very marked degree. In printing offices also great saving resulted from the use of motors, the best example of this being the Government Printing Office in Washington, D. C., which is the largest in the world. Here the operating expenses, formerly $11,000 per day, were reduced about $1,500 per day, due to the greater speed at which presses could be run and the entire absence of dust and oil, which were formerly responsible for the loss of a considerable amount of paper.

NEW PUBLICATIONS.

ADDRESSES AT THE CONVENTION OF THE MERCHANTS' ASSOCIATION OF NEW YORK, 1898. Pamph.; 9 x 6 ins.; pp. 27.

Contents: "The Relation of Carriers and Their Patrons," by George R. Blanchard; "Needful Harbor Improvements," Louis Windmuller; "The Commercial Supremacy of New York," John C. Guhring; "Our Consular Service," John N. Beach.

ODORS AND TASTES OF SURFACE WATERS, with Special Reference to Anabaena, a Microscopical Organism Found in Certain Water Supplies of Massachusetts. By D. D. Jackson, Assistant Biologist, and J. W. Ellms, Assistant Chemist, of the Massachusetts State Board of Health, Boston, Mass. Reprinted from the Technology Quarterly, Vol. X., No. 4, December, 1897. Paper, 7 x 10 ins.; pp. 11; one plate. Address the authors.

The organism to which this reprint is largely devoted gives rise, while in its natural state, to a moldy, grassy odor, which, in the case of decay, changes to a pig pen smell. The natural odor of this and several other organisms mentioned in the pamphlet is believed to be "due to compounds of the nature of essential oils." The pamphlet describes briefly a series of experiments made by the authors to determine the cause of the odor due to anabaena.

ANNUAL REPORT OF THE CHIEF OF THE BUREAU OF CONSTRUCTION AND REPAIR to the Secretary of the Navy, for the Fiscal Year ending June 30, 1897.—Washington, D. C.: Government Printing Office. Paper; 9 x 6 ins.; pp. 75; with diagrams.

This annual report of Chief Constructor Philip Hichborn, U. S. N., Chief of Bureau, contains valuable information relating to the vessels of the U. S. Navy, and upon the work done at the navy yards during the year. One of the very important additions to plant is the model tank to be set up at Washington, and for which Congress appropriated $92,500 on March 3, 1897. The contract for building this tank was awarded to the Penn Bridge Co., of Beaver Falls, Pa., for $50,000. It will be the largest and best equipped model-tank in the world.

THE PROCEEDINGS OF THE 31ST ANNUAL CONVENTION OF THE AMERICAN INSTITUTE OF ARCHITECTS.—Held at Hotel Cadillac, Detroit, Mich., Sept. 29, 30 and Oct. 1, 1897. Published by the Board of Directors. Alfred Stone, Editor. Paper, 9½ x 7 ins.; pp. 117.

The proceedings of this 31st annual convention of the Institute are published in a handsome form. Included are the reports of committees, lists of officers and members, speeches made at the convention and papers read. Among the papers is a very interesting one on the American etcher-artist Whistler, by Mr. W. L. B. Jenney, of Chicago, and a portrait of Mr. A. J. Bloor, for many years Secretary of the Institute, forms a frontispiece to the volume. The present Secretary of the Institute is Mr. Alfred Stone, of Providence, R. I., and those interested should address him.

TEST OF THE SYNCHRONOGRAPH ON THE TELEGRAPH LINES OF THE BRITISH GOVERNMENT.—By Albert C. Crehore, Ph.D., and George Owen Squires, Ph.D. Pamph., 5¾ × 9 ins.; pp. 34; illustrated.

This is a report submitted to the Postmaster-General of the United States giving the results of a rather complete series of tests of the rapid telegraphing system invented by the authors of the paper.

In the report a knowledge of their apparatus and previous experiments (Proc. Am. Inst. E. E., Apr., 1897) is assumed and the recent experiments made on the government telegraph lines in England during the summer of 1897 are described. Four tests were made with circuits ranging from 597 miles to 1,097 miles in length. To make this long circuit the regular postal wires were used from London to Aberdeen via York and Edinburgh, 535 miles; Aberdeen to Glasgow, 151 miles, and Glasgow to London, a distance of 411 miles. Using the ordinary Wheatstone transmitter and receiver and 100 volts, 185 words per minute were sent over the lines. Using the synchronograph and a Wheatstone receiver and a voltage of 215, messages were transmitted at a rate of 540 words per minute. With the synchronograph alone, using a chemical receiver, the rate was 723 words or the limit of the alternator, which was being operated at 2,892 revolutions per minute. In their conclusions the authors state as the result of their experiments that the substitution of the synchronograph for the usual Wheatstone transmitter, retaining the same receiver in each instance, increased the speed threefold. Further, that it is possible to use a higher voltage with a resulting benefit. Figures and curves pertaining to the volume of postal and telegraph business in England are given, and also curves showing the speed and distance relations between wires of different materials, as well as other data of especial interest. The concluding paragraph may be quoted as showing an opinion which is coming more and more into prominence:

> It is believed that the government control and operation of the telegraph would prove a great benefit to the people of the United States. The natural relation between this service and the general postal service requires that they should be under the same department for the most efficient and economical management.

TRADE PUBLICATIONS.

(The standard sizes for pamphlets and trade catalogues recommended by all the principal engineering societies of the United States are: 3 1-2 x 6 ins.; 6 x 9 ins., and 9 x 12 ins.)

GAS AND GASOLINE ENGINES.—New Era Iron Works Co., Dayton, O. Paper, 7⅝ × 5⅝ ins.; pp. 32.

The New Era engines are of the horizontal, single-cylinder four-cycle type, with center crank and two flywheels.

METAL BRAKEBEAMS.—Monarch Brakebeam Co., Detroit, Mich. Paper, 5¾ × 3½ ins.; pp. 12.

This pamphlet describes two forms of brakebeams. The "Monarch" is built up as a bowstring truss with a 2½-in. steel pipe and 1-in. truss rod, while the "Solid" has a 5-in. I-beam. Both are fitted with malleable iron heads for the brakeshoes, wheel guard clips, and brake lever jaws.

WINDMILLS AND WOODEN TANKS.—Williams Mfg. Co., Kalamazoo, Mich. Paper; 4 × 10 ins.; pp. 32; also 6 × 10 ins.; not paged; both illustrated.

These two catalogues describe Manvel, Empire and Kalamozoo windmills; steel towers for elevated tanks; and cedar, cypress, white pine and tamarack tanks; acid vats and silo tanks; hand pumps, well plants and other sundries.

DURYEA MOTOR WAGONS.—The Duryea Motor Wagon Co., 837 State St., Springfield, Mass. Pamph.; 7⅞ × 5½ ins.; pp. 18; illustrated.

This little pamphlet, by means of half-tones and brief descriptions, presents one of the highest types of gasoline road carriages. It clearly shows a form of vehicle, many of which we may expect to see about our streets in the near future.

STEAM JET PUMPS.—The E. W. Vanduzen Co., Cincinnati, O. Paper, 3⅛ × 6 ins.; pp. 14.

In this method of lifting water, a steam pipe is carried down parallel with the main pump pipe, and is tapped into the latter above the water level, the steam jet being directed upward. It is stated that this method is in extensive use, and a number of extracts from testimonials are given.

GAS AND GASOLINE ENGINES.—Columbus Machine Co., Columbus, O. Paper, 6 × 9¼ ins.; pp. 4.

The Brown engine manufactured by this company is of the horizontal type, with central crank and two fly wheels. A special form of electric igniter is used, and the engine can be run in either direction by making a slight change, which can be effected in a few minutes. The sizes range from 3 HP. to 50 HP.

THE NEW WALKER SUSPENSION FOR RAILWAY MOTORS.—The Walker Co., Cleveland, O.

This is circular No. 1065 of the company's regular series. In it a new form of motor suspension is explained and its points of excellence set forth. Briefly, the usual position of the springs is reversed and the motor, instead of resting rigidly upon the axle, rests upon a cross bar, and has springs upon a sleeve, which surrounds the shaft. Suitable arms from this sleeve to the armature shaft hold the gears in proper relative position, while permitting the needed springing.

MILLING MACHINES.—Ingersoll Milling Machine Co., Rockford, Ill. Paper, 8¾ × 6 ins.; pp. 30.

This firm builds slab-milling machines exclusively, with either horizontal or vertical spindles. A new type of machine has been brought out, and the milling cutters are made in all widths and for milling any shape. The illustrations show various patterns of machines for milling surfaces, slotting, dressing boxes, etc.

AIR COMPRESSORS.—The Ingersoll-Sergeant Drill Co., Havemeyer Building, New York. Paper; 5¼ × 3⅜ ins.; pp. 20; illustrated.

This is a condensed edition of the catalogue of air-compressors, showing the various types of compressors, and, on the opposite page, the names of users. It is a handy little volume, which will be supplied to any reader of this notice on application to the firm named.

CANDELABRA AND BATTERY LAMPS.—General Electric Co., Harrison, N. J. Pamph.; 5¼ × 7¾ ins.; pp. 44; illustrated.

This pamphlet is in keeping with all the literature issued by the General Electric Co. As implied in the name, it is devoted to the consideration of miniature incandescent lamps for decorative, dental or surgical purposes. The pamphlet is illustrated with excellent actual size wash drawings of the different styles and sizes of miniature lamps, sockets, receptacles and shades for use upon ordinary incandescent or battery circuits.

SURVEYORS' AND ENGINEERS' INSTRUMENTS AND SUPPLIES.—T. F. Randolph, Cincinnati, O. Paper. 6 × 9 ins.; pp. 36.

This is an illustrated catalogue and price list of instruments and supplies. Among the specialties are a surveyor's compass fitted with a telescope supported by one side frame, this taking the place of the ordinary sights. There is also a light level for ditch and road work, in which the telescope turns on a vertical spindle. The blades of all compass needles are twisted so that the metal is on edge at the ends, thus giving a fine line in reading

MARINE GAS ENGINES.—Union Gas Engine Co., San Francisco, Cal. Paper. 9⅝ × 5¾ ins.; pp. 48.

The Union gas and oil engines are made for marine and stationary work, and are of 4 to 40 HP., while special patterns are kept for engines up to 125 HP. The engines are double cylinder, vertical, inverted direct acting, and the illustrations include a number of half-tones of launches, yachts and trading vessels with engines of 4 to 60 and 120 HP. Some of the vessels have twin screws. Similar engines are used for driving hoists and air compressors, but the stationary engines are of the horizontal type.

ARCHITECTS AND ENGINEERS.—Constable Bros., 22 East 16th St., New York City. Paper, 14 × 11 ins.; pp. 12.

This is a series of handsome photogravures in colors of various public and private buildings designed by this firm. With it is an essay on fire-proofing lately delivered as a lecture by Howard Constable before the Boston Society of Architects. This firm, including Stevenson Constable, late Chief of the Building Department of New York city, will devote especial attention to fireproof construction and tests, in connection with their general business as architects and engineers.

REFRIGERATING AND ICE MAKING MACHINES.—Vulcan Iron Works, San Francisco, Cal. Paper, 6 × 9 ins.; pp. 87.

This firm's plant operates on the compression system, the cooling effect being produced by the evaporation of liquid anhydrous ammonia. The different styles of machines are described, as well as the manufacture of ice by the can system and the plate system, and the methods of insulating cold storage rooms. Specifications are given for plants of various capacities, and there are lists of customers, and particulars of engines, boilers, pumps, etc., manufactured by this firm.

WOVEN WIRE FENCE.—Page Woven Wire Fence Co., Adrian, Mich. Paper; 9 × 6½ ins.; pp. 32; illustrated.

These fences are woven of galvanized wire in such a manner as to provide fully for expansion and contraction. The laterals are made of hard steel wire; and the catalogue illustrates and describes fences for parks or paddocks, farms, gardens, lawns, cemeteries, etc. Ornamental double and single gates are shown; and special attention is paid to the supply of the standard railway fencing. The photographic illustrations show clearly the appearance of the various types of fence in use; while more detailed drawings give the dimensions for each.

BOOSTERS.—Walker Co., Cleveland, O. This is No. 1068 of the regular series of Walker circulars. It is a brief description of what a booster is and the types of such apparatus manufactured by the Walker Co.

ELECTRIC LOCOMOTIVES.—This is also a Walker circular, being No. 1067. As the title implies, it is devoted to describing the several styles of electric locomotives manufactured by this company. This includes small, comparatively light machines for mine haulage when small headroom is obtainable and very narrow gages are used, large and heavier machines still for mine service, special locomotive cars for passenger or freight service, and lastly, electric locomotives for speeds up to 60 miles, capable of exerting a draw-bar pull of 26,000 lbs. when running at a speed of 17 miles per hour. Suitable illustrations accompany the description.

CONSTRUCTION NEWS.

CONDENSED LIST OF CONTRACTS PENDING WITH DATE OF OPENING BIDS.

Bids to be opened.	Work. Place.	See Eng. News.
Mar. 24.	Garbage disposal, Buffalo, N. Y.	Mar. 17
Mar. 24.	Quarrying stone, Saratoga Springs, N. Y.	Mar. 17
Mar. 24.	Park work, Philadelphia, Pa.	Mar. 17
Mar. 24.	Sewers, Philadelphia, Pa.	Mar. 17
Mar. 24.	Water department supplies, Newark, N. J.	Mar. 17
	Advertised, Engineering News, Mar. 17.	
Mar. 24.	Railway, Dublin, Ireland	Mar. 10
Mar. 24.	Water pipe, Norwood, O.	Mar. 10
Mar. 24.	Sewage precipitation tanks, Providence, R.I.	Feb. 24
	Advertised, Eng. News, Feb. 24 to Mar. 17.	
Mar. 24.	Electric light plant, Plum Island, N. Y.	Feb. 24
	Advertised, Eng. News, Feb. 24 to Mar. 17.	
Mar. 24.	Brick, curbstones, etc., Norristown, Pa.	Mar. 24
Mar. 25.	Grading, Omaha, Neb.	Mar. 24
Mar. 25.	Removing barge, Pittsburg, Pa.	Mar. 24
Mar. 25.	Water bonds, Syracuse, N. Y.	Mar. 24
Mar. 25.	Screens (water-works), Pittsburg, Pa.	Mar. 24
Mar. 25.	School building, Mondamin, Ia.	Feb. 17
Mar. 25.	Transmission line poles, Seattle, Wash.	Mar. 10
Mar. 25.	Paving, Minneapolis, Minn.	Mar. 17
Mar. 25.	Paving and sidewalks, Buffalo, N. Y.	Mar. 17
Mar. 25.	Sewer brick, cstgs., etc., Minneapolis, Minn.	Mar. 17
Mar. 25.	Metal work, Oswego, N. Y.	Mar. 17
Mar. 25.	Water bonds, Terrell, Tex.	Mar. 17
Mar. 26.	Electric light plant, Santiago-de-Cuba	Mar. 17
Mar. 26.	Macadamizing, Norwood, O.	Mar. 17
Mar. 26.	Bank building, Glencoe, Minn.	Mar. 17
Mar. 26.	Disinfecting house, Baltimore, Md.	Mar. 17
Mar. 26.	Bonds, Brooklyn, Conn.	Mar. 17
Mar. 26.	Cement sidewalks, Bond Hill, O.	Mar. 17
Mar. 26.	Pipe sewers, Boston, Mass.	Mar. 10
Mar. 26.	Pile protection, Cincinnati, O.	Mar. 3
Mar. 26.	Steam pumps (2), St. Louis, Mo.	Feb. 24
	Advertised, Eng. News, Feb. 24 to Mar. 17.	
Mar. 28.	Water-works, Holly Springs, Miss.	Feb. 17
	Advertised, Eng. News, Feb. 17 and 24.	
Mar. 28.	Electric light plant, Holly Springs, Miss.	Feb. 17
	Advertised, Eng. News, Feb. 17 and 24.	
Mar. 28.	Wharf, etc., Fort Barrancas, Fla.	Mar. 3
	Advertised, Eng. News, Mar. 3 to 24.	
Mar. 28.	Court house, Decatur, Ga.	Mar. 10
Mar. 28.	Brick or block paving, Toledo, O.	Mar. 10
Mar. 28.	Macadamizing, Oshkosh, Wis.	Mar. 10
Mar. 28.	Court house, Worcester, Mass.	Mar. 17
Mar. 28.	Ditch and drains, Brushyfork, Ill.	Mar. 17
Mar. 28.	Asphalt paving, Irvington, Ind.	Mar. 17
Mar. 28.	Electric railway (5½ miles), Myersville, Md.	Mar. 17
	Advertised, Engineering News, Mar. 17.	
Mar. 28.	Block paving, Toledo, O.	Mar. 17
Mar. 28.	Steamer repairs, New York, N. Y.	Mar. 17
Mar. 28.	Pipe sewers, Syracuse, N. Y.	Mar. 24
Mar. 28.	Removing garbage, etc., Montreal, Que.	Mar. 24
Mar. 28.	Special castings, Boston, Mass.	Mar. 24
	Advertised, Engineering News, Mar. 24.	
Mar. 28.	Arc lighting, Flint, Mich.	Mar. 24
Mar. 28.	Curbing, etc., Burlington, Vt.	Mar. 24
Mar. 28.	Paving, Indianapolis, Ind.	Mar. 24
Mar. 29.	Grading, Columbus, O.	Mar. 24
Mar. 29.	Engine foundations, Chicago, Ill.	Mar. 24
Mar. 29.	Naval supplies, Washington, D. C.	Mar. 24
Mar. 29.	Arc lights (2,000 c. p.), Nashville, Tenn.	Mar. 24
Mar. 29.	Water-works, Port Colborne, Ont.	Mar. 17
	Advertised, Engineering News, Mar. 17.	
Mar. 29.	Track elevation, Jersey City, N. J.	Mar. 10
	Advertised, Eng. News, Mar. 10 to 24.	
Mar. 29.	Electrical machinery, etc., Washington, D.C.	Mar. 10
Mar. 29.	Trunk sewers, Cincinnati, O.	Mar. 10
Mar. 29.	County roads (30 miles), Indianapolis, Ind.	Mar. 10
Mar. 29.	Model cutting machine, Washington	Mar. 17
Mar. 30.	Sewers, Glenville, O.	Mar. 3
Mar. 30.	Paving, Wheeling, W. Va.	Mar. 3
Mar. 30.	Repairing pier, Charlevoix, Mich	Mar. 3
	Advertised, Eng. News, Mar. 3 to 24.	
Mar. 30.	Sewers, Cleveland, O.	Mar. 10
Mar. 30.	Pipe sewers, etc., Ann Arbor, Mich.	Mar. 17
	Advertised, Eng. News, Mar. 17 and 24.	
Mar. 30.	Electric railway, Buffalo, N. Y.	Mar. 17
	Advertised, Engineering News, Mar. 17.	
Mar. 30.	Paving (11,000 sq.yds.), Ann Arbor, Mich.	Mar. 17
	Advertised, Eng. News, Mar. 17 and 24.	
Mar. 30.	Masonry work, New York, N. Y.	Mar. 17
Mar. 30.	Building, Newark, N. J.	Mar. 24
Mar. 30.	School building, Washington, D. C.	Mar. 24
Mar. 30.	Macadamizing, Cleveland, O.	Mar. 24
Mar. 30.	Paving brick, Toronto, Ont.	Mar. 24
Mar. 30.	Jail, Hampton, Va.	Mar. 24
Mar. 30.	Sewers, Hartford, Conn.	Mar. 24
Mar. 30.	Water pipe, Toronto, Ont.	Mar. 24
Mar. 31.	Court house bonds, Alexandria, Va.	Mar. 24
Mar. 31.	Grading, paving, etc., Eastchester, N. Y.	Mar. 24
	Advertised, Engineering News, Mar. 24.	
Mar. 31.	Asphalt paving, Cincinnati, O.	Mar. 24
Mar. 31.	Grading (21 miles), Brazil, Ind.	Mar. 24
Mar. 31.	Water supplies, Pittsburg, Pa.	Mar. 24
Mar. 31.	Steel fire boat, Chicago, Ill.	Mar. 24
Mar. 31.	City hall entrance, Chicago, Ill.	Mar. 24
Mar. 31.	Steam heating, etc., Central Islip (L.I.), N.Y.	Mar. 24
Mar. 31.	Asphalt and brick paving, Minneapolis, Minn.	Mar. 24
Mar. 31.	Park supplies, Brooklyn, N. Y.	Mar. 24
Mar. 31.	City supplies, Pittsburg, Pa.	Mar. 24
Mar. 31.	Metal work, Wade Point, N. C.	Mar. 17
	Advertised, Eng. News, Mar. 17 and 24.	
Mar 31.	Transmission line franchse, Los Angeles, Cal.	Mar. 10
Mar. 31.	Cement, Portland, Me.	Mar. 10
	Advertised, Eng. News, Mar. 10 to 24.	
Mar. 31.	Removing wreck, Portland, Me.	Mar. 10
	Advertised, Eng. News, Mar. 10 to 24.	
Mar. 31.	Sewerage system, Newport News, Va.	Mar. 10
	Advertised, Eng. News, Mar. 10 to 24.	
Mar. 31.	Pipe sewers, Paterson, N. J.	Mar. 3
Apr. 1.	Odd Fellows' home, Alton, Ill.	Mar. 3
Apr. 1.	Superstructure, etc., Portland, Ore.	Mar. 3
Apr. 1.	Water pipe (3,116 tons), St. John, N. B.	Feb. 17
Apr. 1.	Boiler plant, heating, etc., Baltimore, Md.	Feb. 24
Apr. 1.	Water pipe (12,000 ft.), Seneca Falls, N. Y.	Mar. 10
	Advertised, Engineering News, Mar. 10.	
Apr. 1.	Water-works, Palmyra, N. Y.	Mar. 10
	Advertised, Engineering News, Mar. 10.	
Apr. 1.	Electric light plant, Marion, Ky.	Mar. 17
Apr. 1.	Curbing (2,000 ft.), Holyoke, Mass.	Mar. 17
Apr. 1.	Church building, Zanesville, O.	Mar. 17
Apr. 1.	Electric light plant, Napanee, Ont.	Mar. 24
Apr. 1.	Paving and curbing, Worcester, Mass.	Mar. 24
Apr. 1.	Viaduct, Denver, Colo.	Mar. 24
Apr. 2.	Macadam road (3,000 ft. long), Orange, Conn.	Mar. 24
Apr. 2.	Macadamizing (3½ miles), Eatonton, N. J.	Mar. 24
	Advertised, Engineering News, Mar. 24.	
Apr. 2.	Boilers, St. Louis, Mo.	Mar. 24
Apr. 2.	Grading, Kansas City, Mo.	Mar. 24
Apr. 2.	Power house, Ottawa, Ont.	Mar. 24
Apr. 2.	Pipe sewers, Milton, Mass.	Mar. 24
Apr. 2.	Approaches, Milwaukee, Wis.	Mar. 17
Apr. 2.	Brick paving, Evansville, Ind.	Mar. 17

Apr. 2. Macadamizing, etc., Cleveland, O. ....Mar. 17
Apr. 2. School building, Brandon, Minn.............Feb. 3
Apr. 2. Dipper dredge, Chattanooga, Tenn. ....Mar. 3
Advertised, Eng. News, Mar. 3 to 24.
Apr. 4. Structural work, Chicago, Ill. ....Mar. 3
Advertised, Eng. News, Mar. 3 to 17.
Apr. 4. Boiler and pump, Fargo, N. Dak. ....Mar. 3
Apr. 4. Wharf, franchise, Summerland, Cal........Jan. 27
Apr. 4. Sewer bonds ($65,000), Santa Ana, Cal. ..Feb. 24
Apr. 4. Court house, Jonesboro, Ga. ....Mar. 10
Apr. 4. Gas or electric lighting, Lawrenceburg, Ind.Mar. 10
Apr. 4. School building, Pipestone, Minn. ....Mar. 17
Apr. 4. Water-works, Fort William, Ont. ....Mar. 17
Apr. 4. Brick paving, Lancaster, O. ....Mar. 17
Apr. 4. Street improvements, Tiffin, O. ....Mar. 17
Apr. 4. Electric lighting, Union City, Ind. ....Mar. 17
Advertised, Engineering News, Mar. 17.
Apr. 4. Viaduct, Atlanta, Ga. ....Mar. 17
Apr. 4. Court house, Indianola, Miss. ....Mar. 24
Apr. 4. Village hall, Summit, Ill. ....Mar. 24
Apr. 4. Steel cells, Kansas City, Mo. ....Mar. 24
Apr. 4. Lighting bonds, Fitzgerald, Ga. ....Mar. 24
Apr. 4. Macadam paving, etc., Paterson, N. J. ....Mar. 24
Apr. 4. Piling, Meaford, Ont. ....Mar. 24
Apr. 4. Hospital buildings, New York, N. Y. .....Mar. 24
Apr. 4. Railroad grading, Clinton, Mass. ....Mar. 24
Advertised, Engineering News, Mar. 24.
Apr. 4. Water bonds, Fitzgerald, Ga. ....Mar. 24
Apr. 5. County bridge, New Whatcom, Wash. ....Mar. 24
Apr. 5. Water-wrks and swrs, Chamberlain, S. Dak.Mar. 10
Apr. 5. Grading, Mount Vernon, N. Y. ....Mar. 24
Apr. 5. Naval supplies, New York, N. Y...........Mar. 24
Apr. 5. Naval supplies, Norfolk, Va. ....Mar. 24
Apr. 5. Electric plant, Baltimore, Md. ....Mar. 24
Apr. 5. Electric lighting (5 years), Carbondale, Ill...Mar. 17
Apr. 5. Deep well pump, De Kalb, Ill. ....Mar. 17
Advertised, Engineering News, Mar. 17.
Apr. 5. Power house, etc., Newark, N. Y. ....Mar. 17
Apr. 5. Steel water-tower, Odebolt, Ia. ....Mar. 17
Advertised, Engineering News, Mar. 17.
Apr. 5. Stone road, Toledo, O. ....Mar. 17
Apr. 5. Lighting bonds, Wilmington, O. ....Mar. 10
Apr. 5. County bridges, Dakotah, Ia. ....Feb. 17
Apr. 6. River work, etc., Chicago, Ill.............Feb. 17
Advertised, Eng. News, Feb. 17 to Mar. 10.
Apr. 6. Channel work, etc., Chicago, Ill...........Feb. 10
Apr. 6. Castings, bars, etc., Cincinnati, O. ....Mar. 17
Apr. 6. Paving and grading, Cleveland, O..........Mar. 17
Apr. 7. Sewer system, Columbia City, Md. ....Mar. 17
Advertised, Eng. News, Mar. 17 and 24.
Apr. 7. Sewer bonds ($31,437), Norwood, O. ......Mar. 17
Apr. 7. Granite paving, etc., Cincinnati, O. ....Mar. 17
Apr. 7. Bridge (150-ft. span), Kalama, Wash. ......Feb. 17
Apr. 7. Sewers, grading, etc., St. Joseph, Mo. ....Mar. 24
Apr. 9. Steel truss bridge, Mansfield, Ill...........Mar. 24
Apr. 9. Ledge excavation, Rockland Harbor, Me...Mar. 10
Advertised, Eng. News, Mar. 10 to 31.
Apr. 9. Dredging, Rockland Harbor, Me. ....Mar. 10
Advertised, Eng. News, Mar. 10 to 31.
Apr. 9. Artesian well, Fort Washington, Md.......Mar. 17
Advertised, Eng. News, Mar. 17 to Apr. 7.
Apr. 11. Concrete blocks, Duluth, Minn..............Mar. 17
Advertised, Eng. News, Mar. 17 to Apr. 7.
Apr. 11. Dredging, Perriwig Bar, Del. ....Mar. 17
Advertised, Eng. News, Mar. 17 to 31.
Apr. 11. Electric lighting, Canton, O. ....Mar. 17
Apr. 11. Highway bridges (2), Chatham, Va. ....Mar. 3
Apr. 11. Lighting bonds, Reno, Nev. ....Mar. 24
Apr. 11. Steel bridge, Lecompton, Kan. ....Mar. 24
Apr. 11. Water bonds ($130,000), Reno, Nev. .....Mar. 24
Apr. 12. Court house and vault, Giddings, Tex. ...Mar. 24
Apr. 12. Steel gas tanks, Washington, D. C. ......Mar. 24
Apr. 12. Grading, etc., Albany, N. Y. ....Mar. 24
Advertised, Eng. News, Mar. 24 to Apr. 9.
Apr. 12. Removing wreck, Davis' Strait, Me. ......Mar. 17
Advertised, Eng. News, Mar. 17 to 31.
Apr. 13. Sewers, Cleveland, O. ....Mar. 17
Apr. 13. Paving, Cleveland, O. ....Mar. 17
Apr. 13. Paving, etc., Ann Arbor, Mich. ....Mar. 24
Advertised, Eng. News, Mar. 17 and 24.
Apr. 13. Brick sewers, Chicago, Ill.................Mar. 24
Apr. 13. Electric railway franchise, Los Angeles, Cal.Mar. 24
Apr. 14. Grading, etc., Wapakoneta, O. ....Mar. 24
Apr. 14. Brick paving, etc., Flint, Mich. ....Mar. 24
Apr. 14. Jail building, Glencoe, Minn. ....Mar. 24
Apr. 14. Fenders and pile sinkers, St. Louis, Mo....Mar. 17
Advertised, Eng. News, Mar. 17 to Apr. 7.
Apr. 14. City hall plans, St. Thomas, Ont...........Mar. 17
Apr. 15. Sewer bonds ($150,000), Memphis, Tenn....Mar. 17
Apr. 15. Sidewalks, Mattoon, Ill. ....Mar. 17
Apr. 15. Lock and approaches, New Orleans, La. ....Mar. 10
Advertised, Eng. News, Feb. 17 to Mar. 10.
Apr. 15. Grading, excavating, etc., Athens, O. ....Mar. 24
Apr. 15. Gas and electric fixtures, Milwaukee, Wis...Mar. 24
Apr. 15. Steamboat, Portland, Me. ....Mar. 24
Advertised, Eng. News, Mar. 24 to Apr. 21.
Apr. 15. Electric light plant, Lewistown, Mont. ....Mar. 24
Apr. 16. Water bonds ($5,000), Tripp, S. Dak. ....Mar. 24
Apr. 18. School building, Atwater, Minn. ....Mar. 24
Apr. 18. School building, Vinton, Ia. ....Mar. 24
Apr. 18. Steel bridge (100 ft.), Rosecrans, Ill. ......Mar. 24
Apr. 18. Electric railway franchise, Riverside, Cal..Mar. 24
Apr. 18. Brick sewer, Toledo, O. ....Mar. 17
Apr. 19. Court house bonds, Anaconda, Mont. ....Mar. 24
Apr. 19. Water-works, Mineral Point, Wis. ....Mar. 24
Advertised, Engineering News, Mar. 24.
Apr. 20. Water-works, Kingfield, Me. ....Mar. 24
Apr. 20. Water-works, Auburn, Ind. ....Mar. 10
Apr. 21. Paving (15,000 sq.yds.), Waukesha, Wis....Mar. 17
Advertised, Eng. News, Mar. 17 to Apr. 14.
Apr. 28. Pump pit, intake pier, etc., Cincinnati, O...Mar. 24
Apr. 30. Town hall, Singapore, S. S. ....Jan. 13
May 1. Plans for sewage disposal, Belper, Eng.....Dec. 16
May 1. Cathedral, Memphis, Tenn. ....Mar. 17
May 1. Electric lighting, Sheboygan Falls, Wis...Mar. 24
May 3. Jail, Dalton, Ga. ....Mar. 17
May 3. Steel cells (4), Visalia, Cal. ....Mar. 3
May 11. County bridge, Gonzalez, Tex. ....Mar. 3
May 18. Bridges (3), Chicago, Ill. ....Mar. 24
May 25. Water franchise, Ridgewood, N. J..........Mar. 24
Advertised, Eng. News, Mar. 24 to Apr. 28.
June 1. Electric lighting (10 yrs.), New Orleans, La. Feb. 17
June 1. Electric railway, Zurich, Switzerland .....Mar. 10
July 1. Water power, Madras, India ....Oct. 28
July 24. Buildings, Belem, Brazil ....Mar. 24
Sept. 12. Hospital plans, San Francisco, Cal........Mar. 24
No date. Dams (2), North Lubec, Me. ....Mar. 17
Advertised, Eng. News, Mar. 17 and 24.
No date. Dam and culvert, Pikesville, Md. ....Mar. 24
" . Wooden bridge, Leavenworth, Kan. ......Mar. 24
" . Railway, Kunkletown, Pa. ....Mar. 24
" . Water supply, Rock Hill, S. C. ....Mar. 24
Advertised, Eng. News, Mar. 17 to Apr. 14.

RAILWAYS.

ALLEGHENY & WESTERN.—J. M. Floesch, Ch. Engr., Kittanning, Pa., writes us that the contract for constructing 11 miles of railway on this line from Punxsutawney, Pa., westward, has been let to the Pennsylvania Construction & Investment Co., of which A. E. Patton, of Curwensville, Pa., is president.

ALASKA.—The Alaska R. R. Co. was incorporated in New Jersey, March 19, with a capital stock of $1,000,000, of which $1,000 is paid in. It is proposed to construct a railway from a point on the Lynn Canal, in Alaska, to Fort Selkirk. The incorporators are: Clinton W. Sweet, New York; Joel Francis Freeman, East Orange, N. J.; Henry W. Desmond, Cranford, N. J.

BALTIMORE & OHIO.—The new tunnel on this line at Falls Cut was used for the first time on March 14. The distance was shortened thereby about 600 ft., and six curves eliminated. The new tunnel is 535 ft. long and has been built for a double track.——Plans of the route for the proposed new entrance of this railway into Washington, D. C., for the purpose of abolishing grade crossings have been agreed upon by the company and District officials, and the street extension plans made to conform thereto. As planned, the Washington Branch will leave its old line near Montello station, proceeding parallel to and 200 ft. from New York Ave., extended until it joins the present Metropolitan Branch. From thence it will proceed down Delaware Ave. on a four-track masonry and earth viaduct to the terminus. Yards will probably be located at the intersection of the two lines in Eckington. It is the intention to do away with every grade crossing in the District of Columbia. The bill authorizing this work will be reported next year.

BEAVER CREEK.—J. B. McIntyre, Engr., Jersey Shore, Pa., informs us that no track extension of this line is contemplated, as stated in current reports.

BUFFALO, ROCHESTER & PITTSBRUG.—Press reports state that Bennett & Talbot, of Greensburg, Pa., and M. H. Smith, of Altoona, Pa, have been awarded the contract by this company for boring a tunnel, 2,300 ft. long, between Punxsutawney and Moss Grove. This is on the proposed extension to Butler, Pa., where it is expected to meet the Pittsburg, Bessemer & Lake Erie and to gain an entrance into Pittsburg. William E. Hoyt, Ch. Engr., Rochester, N. Y.

CHESTNUT RIDGE.—W. W. Booth, of Kunkletown, Pa., informs us that bids are now being received for the construction of this railway from Lehigh Gap to Kunkletown, via Millport and Little Gap, a distance of 15 miles, for the purpose of opening up about 6,000 acres of clay soil. Surveys have been made, the right of way obtained and the capital subscribed. Pres., James Pearsol, Kunkletown, Pa.

CHICAGO, ROCK ISLAND & TEXAS.—John D. Hughes has been awarded a contract, according to reports, for the grading of the first 15 miles of the proposed extension of this line from Bridgeport to Jacksboro, Tex. H. A. Parker, of Chicago, Ill., is interested.

CINCINNATI, GEORGETOWN & PORTSMOUTH.—E. W. White, Vice-Pres., Cincinnati, O., informs us that surveys have been completed and estimates made for the proposed extension of this line from Georgetown to West Union, via Russellville and Eckmanville, O., a distance of 23 miles. The right of way and $50,000 in cash or material has been asked for from the people along the route, and the success of the project depends largely upon the financial assistance given.

COLORADO & NORTHWESTERN.—J. L. Frankeberger, Ch. Engr., Boulder, Colo., informs us that Orman & Crook, of Pueblo, Colo., are the contractors for this proposed line between Boulder and Ward, Colo., 27 miles. Grading will be completed in about 30 days; 15 miles of track are already laid. Surveys to the Eldora mining camp will be made at once. Pres., C. E. Thompson, Boulder.

DENISON, BONHAM & NEW ORLEANS.—A senate bill has passed the house of representatives at Washington granting a right of way to this railway to and through Indian Territory. The road as projected ran from New Orleans, La., through Bonham to Denison, Tex. Ten years ago construction was begun, and several miles of the roadbed completed. It is now proposed to revive the project and to extend the line through Indian Territory.

DES ARC & NORTHERN.—Geo. C. Griffith, Pres., Bald Knob, Ark., informs us that E. R. Dalhoff is building this new line to Des Arc, Ark., to be 20 miles in length. About 11 miles are already completed, and it is expected to finish the balance within 50 days. W. H. Hipolite, Ch. Engr., Higginson, Ark.

ERIE & CENTRAL NEW YORK.—N. A. Bundy, Gen. Mgr., Cortland, N. Y., informs us that 20 miles of this railway from Cortland to Cincinnati, N. Y., are almost completed, and that 16 miles of the same are now in operation. Pres., W. D. Tisdale, Cortland; Ch. Engr., W. M. Miserole, 189 Montague St., Brooklyn, N. Y.

GILA VALLEY, GLOBE & NORTHERN.—William Garland, Pres., 314 Stimson Block, Los Angeles, Cal., informs us that Ward & Courtney, of El Paso, Tex., were awarded the contract, March 10, for constructing a 43-mile extension of this railway, from Geronimo to Globe, Ariz. Work is to be completed by August 31. The other bidders were: Toledo Construction Co., Toledo, O.; Shutt Improvement Co., Pueblo, Colo.; Crouch Construction Co., Chicago, Ill.; L. R. H. Robinson, Phoenix, Ariz.; W. J. Harris, care of C. C. Shroufe, Tucson, Ariz.; Geo. Rheinshild, 611 Bailey St., Los Angeles, Cal.; E. McGarvey, 319 E. 18th St., Cheyenne, Wyo., and Sultan & Caveness, Globe, Ariz.

GULF & INTERSTATE RY., OF TEXAS.—L. E. Beadle, Ch. Engr., Galveston, Tex., informs us that the Bolivar Channel & Dock Co., recently organized, will construct railway terminal facilities and docks at Port Bolivar, across the channel from Galveston. Work on the docks will probably commence during the coming summer. Pres., Fox Winnie, of Galveston.

HERNDON & ALDIE.—A bill has been introduced in the Maryland house of delegates granting a charter to this company with the right to build, equip and operate a railway from a point on the Potomac River in Montgomery county to the main line of the Baltimore & Ohio, and to bridge the Potomac at a point west of the District of Columbia and east of Great Falls.

KNOXVILLE & BRISTOL.—Reports ttate that this company, whose incorporation was noted in our last issue, will build from Knoxville, via Bean Station, in Granger county to Bristol, Tenn. The incorporators are: Henry M. Aiken, Wm. D. Aiken, Peter H. Ponder, B. F. Stubblefield and J. F. Goodson.

MANSFIELD SHORT LINE.—The Crouch Construction Co., First National Bank Bldg., Chicago, Ill., has just been awarded the general contract for the construction of this proposed railway from Shelby to Lucas, via Mansfield, O., a distance of 20 miles. Grading will begin April 1, and will approximate 350,000 cu. yds. of earth; entire work to be completed in six months. Pres., Chas. W. French, Mansfield, O.; Ch. Engr., R. E. Harwood.

MASON CITY & FORT DODGE.—It is announced that the Chicago, Milwaukee & St. Paul has secured control of this line between Mason City and Lehigh, Ia., and that the road will be extended at once from Lehigh southwest to Denham. Pres., W. C. Toomey, St. Paul, Minn.

MASSACHUSETTS.—Bids are asked by the Metropolitan Water Board, 3 Mount Vernon St., Boston, Mass., until April 4, for about 24,700 cu. yds. grading on a portion of a railway south of Sandy Point, in Clinton, Mass., as stated in our advertising columns.

MONROE.—Wm. B. Reily, of the Monroe Ry. & Construction Co., Monroe, La., informs us that surveys have been completed for this proposed railway from Monroe to Natchitoches, La., a distance of about 85 miles. The capital for construction has not yet been secured. It is now desired to transfer the franchises to a company which will build and operate the proposed line. Pres., L. D. McLain; Ch. Engr., Ira W. Sylvester, both of Monroe.

MOSCOW & EASTERN.—Press reports state that a contract has been signed for $500,000 of the bonds of this railway, which is projected to reach the white pine belt lying in Latah and Shoshone counties, at a point 40 miles east of Moscow, upon the Potlatch River. The preliminary survey has been made, and it is expected that the work of constructing the line will be under way by July 1.

MUSQUODOBOIT.—Arthur C. Johnstone, Dartmouth, N. S., writes us that the legislature of Nova Scotia has granted a charter to this railway company which proposes to construct a 40-mile line from Windsor Junction on the Intercolonial Ry., to Middle Musquodoboit, and thence to the Pictou coal fields and Guysborough, as referred to in our last issue. The route is mostly through the Valley of the Musquodoboit, and will open up a good farming district and also facilitate access to valuable timber lands and several gold mines now in operation. The Dominion government and that of Nova Scotia have each subsidized the first 40 miles at $3,200 a mile, and the County of Halifax has granted the right of way. The Pictou coal fields are some 30 miles farther than the present proposed terminus, and if such extension be built the coal fields of that district will be brought 28 miles nearer by rail to Halifax Harbor than by the present route. From Windsor Junction connection will be made with Halifax or Dartmouth over the existing government line. William Chisholm, of Halifax, N. S., also informs us that the final survey will be commenced about the middle of April by the local government engineer. The incorporators expect to meet shortly in order to organize and perfect plans.

PECOS & NORTHWESTERN.—This company was incorporated in Texas, March 19, with a capital stock of $100,000, with headquarters at Amarillo, Tex. It is proposed to construct a line from a town on the state line in Parmer county to the Fort Worth & Denver City Ry., at Amarillo. The directors are: S. H. Madden, W. H. Fuqua, B. T. Ware and R. L. Stringfellow, of Amarillo; A. C. Campbell, Eddy, N. Mex.; Percy Hagerman, of Colorado; W. F. Dunning, New York.

ROSENBERG, DAMON MOUND & GULF.—This company has been granted a charter in Texas, to build a railway from Rosenberg to Damon Mound, Tex., a distance of 20 miles. The incorporators are: Noah Allen, Galveston, Tex.; Joseph Billings and George B. Lang, of Rosenberg, and others.

ST. LOUIS & OKLAHOMA CITY.—J. F. Hinckley, Ch. Engr., Sapulpa, Ind. Ter., writes us that all the contracts have been let for the construction of this proposed railway from Stroud to Oklahoma City, Okla., via Chandler and Wellston, a distance of 103½ miles. Contractors, Johnston Bros. & Faught, of St. Elmo, Ill., as reported in a previous issue. Pres., W. L. Huse, care of St. Louis Trust Co., St. Louis, Mo.

SAN FRANCISCO & SAN JOAQUIN VALLEY.—Foley Bros. & Muir, of St. Paul, Minn., write us from Martinez, Cal., that they will not sub-let any work on the proposed Franklin tunnel which is now being built by them on this line through a spur of the Coast Range, in Contra Costa county, Cal. Information from W. B. Storey, Jr., Engr. and Gen. Supt., San Francisco, Cal., regarding the nature of the work may be found in our issue of February 24.

SANTA FE & GRAND CANON.—P. F. Randall, Ch. Engr., Cedar Rapids, Ia., informs us that preliminary surveys have been made by him for a route from Williams to the Grand Canon of the Colorado River at a point where the Bright Angel trail leaves the edge of the canyon to go down to the river; and also a survey from a point 22 miles south from Grand Canon on the Williams survey to Flagstaff, over 90 miles to the canon. Lombard, Goode & Co., of New York, are the chief promoters of the enterprise.

SCRANTON & TUNKHANNOCK.—J. Wood Pialt, Tunkhannock, Pa., writes us that meetings have been held at East Lemon, Nicholson and Tunkhannock to consider the advisability of building a 9-mile steam railway from Tunkhannock to Factoryville. Nothing has yet been definitely decided upon. The committee at Nicholson is composed of F. C. Briggs and Moses Shields, and at Tunkhannock, of L. F. Camp, C. A. Little and T. H. Pialt.

TEXAS.—A. W. Moursund, of Fredericksburg, Tex., writes us that several years ago a company undertook to build a railway from a point on the San Antonio & Aransas Pass Ry. to Llano, via Fredericksburg, and that 43 miles were graded on different parts of the route, when the company failed. Gillespie county now proposes to give this partly completed roadbed, the right of way and a bonus of $25,000 to the company undertaking to complete the road from the San Antonio & Aransas Pass Ry. to Fredericksburg, a distance of 24 miles.

WASHINGTON COUNTY.—G. M. Rusling, Ch. Engr., Machais, Me., informs us that about 12 miles of this proposed railway from Calais to Ellsworth, Me., a distance of 116 miles, are graded and ready for track, and that work is being done whenever the weather permits. Rails have all been bought, and about 1,000 tons delivered; likewise the ties. It is expected to complete the road during the coming summer. Sub-contractors, William Kenefick, Ellsworth, Me.; and R. F. Pivinac, Calais, Me.

WAYCROSS AIR LINE.—Reports state that the old right of way of this line, which was surveyed seven years ago between Nicholls and Douglas, Ga., will be retraced and improved by Col. J. T. Stone, C. E., Pensacola, Fla. It is expected to begin work in a few days, so as to commence grading the right of way as soon as possible. Pres., B. A. Denmark, Savannah, Ga.

WAYNESVILLE & NEWPORT.—This company was incorporated in New Jersey, March 7, with a capital stock of $1,000,000, with all paid in, to construct and operate a railway system in West Virginia. The incorporators are: John B. Hart, Clarksburg, W. Va.; Jacob J. Holloway, Wheeling, W. Va.

WEST VIRGINIA.—Kibler & Kay, of Mount Orab, O., and O'Keefe, W. Va., inform us that they cannot yet give definite information regarding proposed railway from Mount Airy, for the transportation of timber and mineral products. The line will be about 15 miles in length, of a 3-ft. gage with 30-lb. steel rails; extensions to be built as demand requires. Rights of way were expected to be fully obtained by March 20, after which a survey will be made. Grading will commence about June 1.

YUKON.—Press reports state that at a meeting of capitalists interested in the construction of a railway to the Yukon country, held at San Francisco, Cal., W. C. Alberger presented a report based upon recent explorations and observations made during an exhaustive surveying trip to Alaska, showing that a route up Copper River was not only feasible, but practicable. It was decided to organize a party of surveyors, which is expected to start as soon as weather permits, probably by May 15.

STREET AND ELECTRIC RAILWAYS.

LEWISTON, ME.—It is reported that the Lewiston, Brunswick & Bath Electric R. R. Co., which proposes to build between these cities, has made a 10-year contract with the Cabot Mfg. Co., of Brunswick, for a daily supply of 1,000 HP. M. B. Shaw, Pres., Bath; John A. Jones, Ch. Engr., Lewiston.

CLINTON, MASS.—Reports state that Wm. H. Tylee, of Worcester, Mass., has been awarded the contract for building the proposed Worcester & Clinton St. Ry. A 90-lb. grooved rail will be laid, and it is expected to have the line in operation by July 1. Sub-contracts, it is stated, will probably be let.

BRISTOL, CONN.—It is reported that the new extension of the third rail system on the New England R. R. to Bristol will be ready for operation by June 1. L. B. Bidwell, Ch. Engr., Boston, Mass.

MERIDEN, CONN.—It is reported that work is being pushed on the proposed Meriden, Southington & Compounce tramway for which Sanderson & Porter, 31 Nassau St., New York, are the contractors. The cars will be furnished by Jackson & Sharp, of Wilmington, Del., and the Berlin Iron Bridge Co., of East Berlin, Conn., will construct eight bridges. Frank Atwater, of Meriden, is interested.

NEW HAVEN, CONN.—The New Haven St. Ry. Co. is said to have awarded the contract for extending its road from East Haven to Cosy Beach and from Centerville to Mount Carmel to C. W. Blakeslee & Sons. The length of new track will aggregate six miles, and the work will be completed about June 1. G. A. W. Dodge, Gen. Mgr., 16 Exchange Bldg.

BALDWINSVILLE, N. Y.—The Baldwinsville & Liverpool Ry. Co. was granted a franchise, March 16, to construct an electric railway from Liverpool to Baldwinsville. This company was incorporated Feb. 15, by John C. Kenyon, B. C. Meays and Walter M. Mullin, of Baldwinsville, and others, as stated in our issue of March 3.

BALLSTON SPA, N. Y.—The Saratoga Traction Co. has filed a certificate of extension of its line from Saratoga Springs and Malta to Ballston Spa.

BUFFALO, N. Y.—The Buffalo Valley Co. was incorporated, March 21, with a capital stock of $350,000, to construct and operate an electric surface railway 27 miles long, from the east city line of Buffalo, in the town of Cheektowaga, to the village of Java, Wyoming county. The directors are: Luther S. Bent and Felton Bent, of Philadelphia, Pa.; Mason D. Pratt and Edgar C. Felton, of Steelton, N. Y.; Herbert P. Bissell and J. Henry Metcalf, of Buffalo; Joseph R. Foard and Fred W. Wood, of Baltimore, Md.; Benjamin Watson, Strykerville, N. Y.

FLUSHING (L. I.), N. Y.—The Flushing & South Shore R. R. Co. was incorporated March 16 with a capital stock of $150,000. It is proposed to construct a standard gage road 15 miles long, from Flushing to a point on the Long Island R. R., between Fenhurst and Woodsburg, Queens county. The directors are: William F. Brown, Edward J. Boyle, William L. C. Allan, George A. Hamilton, William J. Hawson, M. J. Keany and J. Hollis Gibson, of Brooklyn, N. Y.; Louis E. Freeman, Orange, N. J.; Francis L. White, Summit, N. J.

FRANKFORT, N. Y.—E. R. Weaver, Town Clk., informs us that the franchise granted to Beckwith & Quackenbush, of Herkimer, N. Y., to build a 9-mile electric railway from Frankfort to Utica, N. Y., only needs the signature of the commissioner of highways in order to allow the company to begin construction.

PORT JERVIS, N. Y.—The village trustees have granted the Port Jervis Electric St. Ry. Co. an additional franchise to extend its street railway system at this place. C. J. Field, Vice-Pres. and Ch. Engr., 30 Broad St., New York.

WEST ONEONTA, N. Y.—The West Oneonta & Lawrence Ry. Co. was incorporated, March 16, with a capital stock of $750,000, to build five miles of electric railway between the villages named. The directors are, Frank Gould, Parker Wilson, Albert D. Getman, Herbert H. Getman, Walter S. Whipple and Harry W. Lee, of Oneonta; David S. Peet, Peter Seever and P. K. Strong, of Laurens.

WHITESBORO, N. Y.—George W. Chrisman, Comr. of Highways, will give a hearing, March 29, to the application of the Utica Suburban Ry. Co. for a franchise to construct and operate a street surface line through the town of Whitestown. Pres., John W. Boyle, Utica, N. Y.

BALTIMORE, MD.—It is announced that the power houses of the Baltimore City Passenger Ry. Co., on Eutaw St., near German St., will soon be converted from a cable to an electric power station for the red and white lines of this company. Pres., Walter S. Franklin.——Plans are being prepared, according to reports, for the extension of the Wilkens Ave. line of the Baltimore Consolidated Ry. Co., from its present terminus at the Gynn Falls bridge, to a connection with the Catonsville line. Pres., Nelson Perin.

NEW KENSINGTON, PA.—The borough council, March 17, granted the New Kensington St. Ry. Co. a 999-year franchise to construct and operate a single-track car line over 5th Ave., from Parmassus to Arnold. A bridge will be built across the Allegheny River, at 19th St., to connect with the Tarentum St. Ry. The company was incorporated Feb. 23, by T. A. Mellon, Jr., and others, of Pittsburg, Pa., as stated in our issue of March 3.

RICHMOND VA.—E. R. Williams, Pres. Richmond Traction Co., informs us that this company does not intend to construct the proposed extension to its system at this time.

BIRMINGHAM, ALA.—G. M. Williams, Gen. Mgr., Birmingham Traction Co., informs us that this company has just bought the 3¾ miles of steam railway from Birmingham to North Birmingham Park, and that the same will be immediately overhauled, relaid with 60-lb. steel rails, and equipped with electricity. All the material has been obtained, and the power house now being built for the East Birmingham lines will supply the power. Pres., A. T. London; Ch. Engr., Geo. H. Clark, both of Birmingham.

LUDLOW, KY.—Monte L. Green, Pres., Crescent Springs & Erlanger St. R. R. Co., 130 Longworth St., Cincinnati, O., informs us that rights of way are now being obtained for this proposed electric railway between Ludlow and Florence, 7 miles. Communication is now desired with one who will become a promoter of the project. E. O. Young, Ch. Engr., Covington, Ky.

WELLSTON, O.—Bids are being received, according to reports, for the installation of an additional power plant for the Wellston & Jackson Belt Line, for the purpose of supplying power for an extension to be built to Coalton and Glen Roy. F. B. Shelton, Ch. Engr., Columbus, O.

DETROIT, MICH.—It is reported that contracts will soon be awarded for the construction of the proposed electric railway between Detroit and Toledo, O., at a cost of about $1,500,000. John C. Shaffer, of Chicago, is said to be the chief promoter of the project; Gilbert Wilkes, of Detroit, is engineer.

PONTIAC, MICH.—Alfred R. Duman, C. E., 128 East Elisabeth St., Detroit, Mich., writes us that a company has been organized by George E. Taylor, Flint, Mich.; Hon. L. W. Smith and J. E. Sawyer, of Pontiac, and others, to build an electric railway from Pontiac to Flint, via Drayton Plains, Waterford, Clarkston, Ortonville, Goodrich, Atlas and Grand Blanc, Mich., a distance of about 40 miles. The road will be solidly built with 70-lb. T-rail, so that heavy traffic can be carried as on a steam road. The best electric system will be used and two power houses will be built, located respectively in Pontiac and Flint. Interested parties are now negotiating with Eastern capitalists, and the company hopes to start grading in a few weeks. For further information address Joseph E. Sawyer, Attorney at Law, Crofoot Bldg., Pontiac.

SAGINAW, MICH.—It is announced that plans are now well under way for the new electric line which the Saginaw Suburban Ry. Co. intends to construct from Saginaw to Flint. Construction work is expected to begin in April and to be completed by June 1. The company is capitalized at $100,000, and the officers are: Pres., George Silsby, Saginaw; Secy., A. H. Swarthout, Saginaw; Treas., Dr. Phil Porter, Detroit, Mich.

BELLEVILLE, ILL.—Track-laying on the St. Louis, Belleville & Suburban Electric Ry. is expected to be completed soon, and the line to be in operation between Belleville and East St. Louis by May 1.

PINE BLUFF, ARK.—The council is considering a proposition to establish a street railway and an electric light system in this city.

FORT SMITH, ARK.—Tom Ben. Garrett, Mayor, informs us that Samuel McLoud, of Fort Smith, has been granted a franchise to build six miles of electric railway and to supply the city for ten years with electric light. His bid for light and railway franchise combined was at the yearly rate of $80 a light; the Fort Smith & Van Buren Light & Transit Co. bid $100 for the same privilege.

ST. LOUIS, MO.—The United Traction Co., of this city, has been incorporated, with a capital stock of $2,000, by John Scullin, James Campbell and Harry Scullin.

LOS ANGELES, CAL.—Bids are asked by the supervisors of Los Angeles county, until April 13, for a franchise for the construction of a single or double-track electric railway from Los Angeles to the western line of South Pasadena. T. E. Newlin, Cy. Clk.

PASADENA, CAL.—The San Gabriel Traction Co. has been incorporated, with a capital stock of $1,000,000, to build a line from Los Angeles to this city with a branch to Alhambra, Sierra Madre, Monrovia and Duarte, a total distance of about 22 miles. The directors are: James S. Graham and S. P. Anderson, of Chicago, Ill.; Walter S. Maxwell, Bradner W. Lee and Albert Hadley, of Los Angeles, Cal.

RIVERSIDE, CAL.—Bids are asked until April 18, according to reports, for the purchase of an electric railway franchise in this city. Frank A. Miller is interested.

HILO, HAWAII.—Representative Loebenstein, of Hilo, has introduced a bill in the house providing for the construction of an electric railway by the Electric Light Co., of this city.

HONOLULU, HAWAII.—Press reports state that the Honolulu Rapid Transit Co. is being organized here to build about 20 miles of street electric railway in and near this city. C. G. Ballentyne, Chn. Com.

ELECTRIC LIGHT AND POWER.

PITTSFIELD, ME.—F. L. Smith, of Smith & Conant Bros., has applied for permission to erect a plant of 30 arc and 1,500 incandescent lights.

BERLIN FALLS, N. H.—We are informed that bids are wanted at once for building a plant for the Northern Electric Co., recently incorporated. Address Herbert T. Goss, Quincy House, Boston, Mass.

BENNINGTON, VT.—The Bennington Water Power & Light Co., which is to supply the power for the Bennington & Hoosick Valley Ry., has let contracts for the new power station at Hoosick Falls, a 400-HP. steam engine, additional boilers with a capacity of 400 HP., and a new 300-HP. water wheel. A new brick building, 50 × 60 ft., is to be erected for the power house. The work is to be completed by June 1, according to reports.——The trustees have been authorized to put in additional arc lights and to extend the Gamewell fire alarm system.

ABINGTON, MASS.—D. R. Coughlan, Town Clk., writes us that no steps have yet been taken in regard to the proposed plant, noted in our issue of last week.

MANSFIELD, MASS.—The legislature has passed a bill authorizing the water supply district to erect an electric light plant to cost about $15,000. F. L. Cady may be addressed.

PALMER, MASS.—The plant at this place was destroyed by fire with a loss of about $25,000, according to reports. Supt., E. H. Collins; Elect. Engr., W. E. Shea.

READING, MASS.—At a recent town meeting it was voted to appropriate about $4,000 for extending the plant. E. B. Drake may give information.

DANBURY, CONN.—The council has voted to secure a plant. Councilmen Taylor and Starr may be addressed.

CHARLOTTE, N. Y.—This place voted March 15 to construct a plant to cost $10,000 and water-works to cost $25,000. Pres., Geo. P. Goulding.

LODI, N. Y.—The question of erecting a plant is being considered, according to reports.

ONEONTA, N. Y.—Geo. W. Lewis, Secy. Electric Water Power Co., writes us that bids will probably be received in about 30 days for constructing a plant of 80 2,000-c. p. arc and 1,200 16-c. p. incandescent lights; estimated cost, $40,000. Des. Engr., O. A. Nutler, Oneonta.

PORT JERVIS, N. Y.—We are informed that the Port Jervis Light & Power Co. will receive bids in April for constructing the plant to cost about $50,000. Des. Engr., C. J. Field, 30 Broad St., New York.

SYRACUSE, N. Y.—Alderman Chas. G. Soldan, Chn. City Hall Com., writes us that the board is considerng the question of a plant for the city hall, but up to March 19 nothing definite had been decided upon. There are said to be about 1,000 lights in the building.

WARWICK, N. Y.—Geo. Whitman, Pres. Warwick Electric Light & Power Co., writes us that the plant is completed and in operation. We noted in our issue of March 10 that the company had been incorporated with a capital stock of $25,000.

CRANFORD, N. J.—The Cranford Light & Water Co. is reported to have received a perpetual franchise for lighting this town. Edgar E. Heston may be addressed.

MANTUA, N. J.—Press reports state that there is a probability that the towns within a radius of 10 miles from here, including Mullica Hill, Jefferson, Mickleton and Alcyor Park, will soon be lighted by electricity. Negotiations are pending for the purchase of Jessup's Mill, below this place, by a party of business men, who propose to convert the mill into an electric light plant, getting power from the lake. Blair Smith, Wenonah, N. J., may be addressed.

MERCERSBURG, PA.—The construction of a plant in this place will be begun by a private company, according to reports.

PHILADELPHIA, PA.—Charles McCaul, Arch. and Builder, 10 North Eleventh St., has about prepared plans for a power house at 32d and Walnut Sts., for the Allison Mfg. Co. It is to be brick and iron, two stories, 55 × 40 ft., and will have the latest improved power equipment put on by the owners—heavy transmission machinery, piping and covering, boilers, engine, dynamos, etc.

WILKES BARRE, PA.—The county commissioners are reported as again considering the question of installing a plant at the county jail.

BALTIMORE, MD.—Bids are asked until April 5 for installing a plant in the post office building in this city. O. L. Spaulding, Asst. Secy. Treasury Dept., Washington, D. C.

OAKLAND, MD.—This place voted March 14 to issue $25,000 in bonds for a plant and water-works. R. S. Jamison, Mayor.

NEWPORT NEWS, VA.—Wm. J. Payne, Richmond, Va., writes us that the charter for the Newport News & Old Point Ry. & Electric Co. carries with it the privilege of lighting this place, Hampton, Phoebus and Old Point.

COLUMBIA, S. C.—The Columbia Water Power Co. 53 State St., Boston, Mass., and Columbia, proposes to erect a new dam for the Saluda River, near this place, and to transmit about 3,000 HP.

FITZGERALD, GA.—Bids are asked until April 4 for the purchase of $33,000 of 6% semi-annual 30-year-old bonds for building the plant and water-works, noted in our issue of last week. C. C. Goodnow, Mayor.

GREENSBORO, ALA.—L. V. Massey, Mgr. Greensboro Light, Power & Water Co., writes us that the plant will be installed as an addition to the water-works. The work will not be let by contract, but the city will buy the engines, boilers, generators, lines, etc., and install them itself. The plant will require 30 arc and 600 incandescent lights; estimated cost, $12,500.

MONTGOMERY, ALA.—W. F. Vandiver, of the Montgomery Light & Power Co., writes us that the company has placed contracts for furnishing new dynamos, 1,000-HP. enigne, two additional 200-HP. boilers, etc. Plans for a new gas plant for the company are being prepared.

SHEFFIELD, ALA.—A. F. Walker, 913 Austin Bldg., Atlanta, Ga., has been engaged to make surveys, estimates, etc., for the proposed power plant for the Muscle Shoal Power Co. No construction will be undertaken for several months.

McCOMB, MISS.—C. C. Jarvis, Mayor, has been inspecting plants and water-works in various towns with a view to putting in a plant here. Des. Engrs., Sanders & Porter, Columbia Bldg., Louisville, Ky., and Brookhaven, Miss.

NASHVILLE, TENN.—Bids are asked until March 29 for furnishing this city with arc lights of 2,000 c. p. for 5, 7½ or 10 years. W. T. Smith, Chn. Bd. Pub. Wks.

TRENTON, TENN.—This place voted March 10 to issue bonds for a plant and water-works.

HAWESVILLE, KY.—A franchise has been granted to a Jellico, Tenn., company, according to reports. The plant will have 600 lights.

LAWRENCEBURG, KY.—Miss Harriet Glascock, Maysville, Ky., is reported to have submitted plans and specifications for a plant in this place.

NICHOLASVILLE, KY.—It is stated that a plant will be built in this place by Miss Harriet Glascock, Maysville, Ky.

LUDLOW, KY.—We are informed that the Kentucky Electric Co. will want material, dynamos and lamps for the proposed plant of 80 arc and 1,500 incandescent lights, the steam plant being already acquired; estimated cost, $20,000. Pres., John Devere, Devere Electric Co., Cincinnati.

COALTON, O.—The Wellston & Jackson division of the Hocking Valley, which is operated by electricity, is new receiving bids for the installation of an additional plant in the power house at Wellston by which the electric service can be extended to Coalton and Glen Roy, Coalton having just given a 25-year franchise for lighting the town, according to reports. F. B. Sheldon, Ch. Engr., Columbus, O.

MIDDLEPORT, O.—We are informed that this place will probably vote April 4 on the question of building a plant. J. H. Palston, Mayor.

WAPAKONETA, O.—This place will vote April 14 on the question of issuing $5,000 in bonds for improving the plant, according to reports.

ELWOOD, IND.—The American Tin Plate Co., it is reported, will put in a plant here.

GOSHEN, IND.—Press reports state as follows: James Smith and John McAuley, on March 15, through their attorneys, Deahl & Deahl and I. A. Simmons, filed a complaint in the Circuit Court praying for an injunction against this city to restrain it from contracting for an incandescent light plant, bids for which were to be considered on March 18. The city at present is reputed to be $30,000 in debt over and above its constitutional limit.

SOUTH BEND, IND.—We are informed that the Indiana Heat, Light & Power Co. has not completed plans for the proposed plant, but it is hoped to soon have them prepared; estimated cost, $100,000. Mgr., H. H. Hosford.

BADAXE, MICH.—The informal vote taken March 18 on the question of a municipal plant resulted in favor of the purchase of the plant from the electric company. Pres., S. H. Blakely.

CASS CITY, MICH.—This place voted March 14 to construct a plant and water-works. Pres., J. H. Striffler; Clk., Hugh Reed, Jr.

CHELSEA, MICH.—This place is reported to have voted March 14 for a plant and water-works.

FLINT, MICH.—Bids are asked until March 28 for lighting this city with about 100 2,000-c. p. arc lights for a term of five years. M. E. Houran, Chn. Com.; F. P. Baker, Cy. Clk.

LYONS, MICH.—S. W. Webber, Jr., Pres., writes us that this place voted by a large majority March 15 to construct a plant of about 12 arc and 500 incandescent lights. The election, however, was illegal and another one has been called for April 2.

RICHMOND, MICH.—F. W. Burke, Clk., writes us that this place voted 204 for and 69 against for issuing $9,000 in bonds for a plant, to be operated by steam.

ROGERS, MICH.—The question of the construction of a plant is being considered, according to reports.

SAULT STE. MARIE, MICH.—H. C. Thompson, Cy. Engr., writes us that bids will be asked for constructing a plant of 100 arc lights of 1,200 c. p.; estimated cost, $18,000. The new pumping station, which will be built this season, will contain the plant; estimated cost, $6,000. ——Local papers state that plans are about completed for the proposed improvements to the plant of the Edison-Sault Electric Co., to cost about $75,000. Pres., H. T. Dunbar; Mgr., W. F. Kingan.

SCHOOLCRAFT, MICH.—This place voted March 14 against issuing $6,000 in bonds for a plant. G. M. Hudson, Pres.

VICKSBURG, MICH.—The people of this place are reported to have voted March 14 in favor of a plant and water-works. Population (1890), 982.

WHITEHALL, MICH.—This place voted March 14 to issue $4,000 in bonds for a plant of 35 arc and 600 incandescent lights. Pres., J. L. Steffe; Clk., H. B. Carr.

CHICAGO, ILL.—Murphy & Sullivan, 5003 Dearborn St., Chicago, submitted the lowest bid March 8, at $4,778, for furnishing 192 brick manholes and 64,289 ft. of 3-in. tile and 3,218 ft. of 1½-in. steel pipe for the conduits in Humboldt Boulevard, etc. The American Electrical Works, 241 Madison St., Chicago, submitted the lowest bid, at $15,758, for furnishing about 35,400 ft. of cable. E. G. Schubert, Secy. West Chicago Park Comrs.

HOMER, ILL.—We are informed that most of the machinery for the plant of the Homer Light & Power Co., just incorporated, has beer purchased. The plant will have 25 arc and 100 incandescent lights; estimated cost, $6,000. Des. Engr., J. D. Wallace, Champaign.

SHEBOYGAN FALLS, WIS.—Bids are asked until May 1 by C. S. Weissee & Co. for furnishing a plant of 20 arc and 400 incandescent lights; estimated cost, $3,500. The company was recently granted a franchise at $45 a year.

MILO, IA.—The question of building a plant is reported as being considered.

BARNESVILLE, MINN.—This place is reported as preparing to ask the legislature for permission to build a plant, water-works and a sewerage system. Chas. Marden, Cy. Attorney.

CANBY, MINN.—The construction of a plant is proposed by G. H. Simons, according to reports.

STROMSBURG, NEB.—S. B. Samuelson, Cy. Clk., writes us that so far the question of building a plant has only been discussed.

GRAND FORKS, N. DAK.—The question of approving of the awarding of contracts for a plant will be voted upon soon, according to reports. Mayor Dennie may be addressed.

LEWISTOWN, MONT.—Bids are asked until about April 15 for constructing a plant of 1,000 incandescents of 16 c. p. for the Citizens' Electric Light Co.; estimated cost, $6,000. Pres., G. W. Cook.

FORT SMITH, ARK.—T. B. Garrett, Mayor, writes us that Samuel McLoud, Fort Smith, has been awarded the contract for lighting and equipping an electric railway six miles long at $80 a light a year for 10 years. Mr. McCloud's bid for lighting alone was $70 a light a year. The Fort Smith & Van Buren Light & Transit Co. was the only other bidder at $100 and $61.50, respectively.

MALVERN, ARK.—C. W. Turner is reported to have been granted a 25-year franchise; the plant to be erected in six months.

PINE BLUFF, ARK.—The council has been asked to grant a franchise for lighting and a street railway.

ROCKPORT, ARK.—Geo. A. String, Peoria, Ill., is reported as interested in a proposed water power plant at this place.

SPRINGFIELD, MO.—It is stated that estimates are being considered for the proposed plant of about 2,000 incandescent and 100 arc lights.

SEATTLE, WASH.—The Snoqualmie Falls Power Co. will erect a water power plant to have a shaft 350 ft. deep through rock. Down this shaft will be run a cast-iron pipe 7 ft. in diameter. At a depth of 350 ft. beneath surface a pipe and shaft will turn at right angles, following course of stream 200 ft. In this cavern will be the waterwheels and dynamos. From the transformer house it passes by wires to Seattle and Tacoma. Should it ever become necessary to utilize the entire power to be had from the stream, 30,000 HP. could be obtained. As it is 3,000 HP. will be furnished first. Bids will be opened March 25 for furnishing poles for this plant. Consult. Engr., Thos. T. Johnston, Security Bldg., Chicago; Wm. T. Baker, Board of Trade, Chicago, Ill., and Chas. H. Baker, Seattle, may be addressed.

VISALIA, WASH.—Wm. H. Hammond, Mayor, A. G. Wishon, Mgr. Water-Works, Visalia, and W. G. Henshaw, of the Union National Bank, Oakland, Cal., are interested in a proposed plant on the Kaweah River, to furnish 1,600 HP.; estimated cost, $200,000. Work will be begun in a short time, according to reports.

CALISTOGA, CAL.—It is stated that the Clear Lake Electric Power Co. has completed a survey for the dam. It has changed its plans in regard to size of plant, and will not generate more than 10,000 HP., probably less.

PROVO, UTAH.—The council is considering the question of granting a franchise to the Telluride Power & Transmission Co. or of constructing a municipal plant, according to reports.

RENO, NEV.—Bids are asked until April 11 for the purchase of $20,000 of 6% electric light plant bonds. F. B. Porter, Cy. Clk.; R. S. Osborn, Pres. Council.

ASHCROFT, B. C.—We are informed that bids are wanted by the Ashcroft Water-Works Co., Ltd., for furnishing the machinery for a plant and water-works. The power will be generated from the Bonaparte River. John Shields, Ashcroft, may be addressed.

BRIDGETOWN, N. S.—Curry, Bent & Co. are reported as interested in a proposed water power plant.

NAPANEE, ONT.—Bids are asked until April 1 for constructing a plant of 2,000 incandescent lights of 16 c. p. We are informed that the dam has already been built, and has a 20-ft. head. The plant is for lighting and power purposes, and will be owned by John R. Scott. A 9-mile line of overhead wire will be required to reach this place from the plant to be located at Campden East. Four other villages on the line are to be lighted. Elect. and Des. Engr., Robt. Storie, Napanee.

ORILLIA, ONT.—The council is reported as considering the proposition of obtaining power from the Ragged Rapids, about 15 miles from here.

OSHAWA, ONT.—It is stated that the Oshawa Electric Light Co. will purchase a 1,500-light alternating dynamo, etc. Pres., E. S. Edmundson.

OTTAWA, ONT.—Bids are asked until April 2 for constructing a power house on section 3 of the Soulanges Canal; bond, $1,000. L. K. Jones, Secy. Dept. of Rys. and Canals, Ottawa.

MEXICO, MEX.—"The Journal of Commerce" states as follows: How much electrical material is likely to be used in Mexico may be judged by the advices recently received saying that a syndicate of Mexican capitalists has obtained a concession to utilize 56 waterfalls, five of which are in the state of Chiapas, 45 in Campeche, two in Tabasco, two in Oaxaca, one in Guerrero, one in Hidago and two in the state of Mexico. It is announced that the original concessionaires have sold their rights to a syndicate in New York city, and that the latter propose to establish 122 new industries at different points of the country. The majority of these industries will utilize electric power.

EAST LONDON, CAPE OF GOOD HOPE, S. A.—Plans and specifications for a plant for this city are reported to have been completed. They will be capable of furnishing 2,804 16-c. p. incandescent and 43 arc lights and for furnishing power for three miles of railway. A plant will also be erected, it is stated, for the Monastery Diamond Mine, Orange Free State. R. Lewis Cousens, Consult. Engr.

NEW COMPANIES.—Trenton Light & Power Co., Trenton, Ill.; $8,000; J. C. Eisenmayer, Louis Reimann, Frank Leonard.

Smead Cremating & Power Co., Toledo, O.; $100,000.

Chester Valley Electric Light, Heat & Power Co., Downingtown, Pa.; $20,000, with $2,000 paid in; Joseph R. Downing, John T. Fox, Guyon Miller, T. E. Parke, C. W. Walker, Edward Kerr, Joseph H. Johnson, Downingtown. Jos. R. Downing, Treas., writes us that the building is about under cover and all the contracts for furnishing the machinery have been let.

Rock Hill Water, Light & Power Co., Rock Hill, S. C.; $50,000; A. R. Smith, David Hutchinson, R. T. Fewell, James M. Cherry.

Citizen's Electric Light & Power Co., Gonzales, Tex.; $5,000; A. Kleine, Jr., W. B. Houston, Charles Berringer, L. C. Brunner, J. D. Sayers, Jr.

Enterprise Electric Co., Covington, Ky.; to apply for a 50-year franchise; Bradford Shinkle, of the Covington Gas Co.

Arkansas Land & Improvement Co., Jersey City, N. J.; $100,000, with $1,000 paid in; to construct and operate an electric light and power plant, etc.; Lucius A. Cole, East Orange, N. J.; Geo. Muir, A. B. Hall, New York

South Milwaukee Electric Light Co., South Milwaukee, Wis.; $15,000; Wm. P. Cook, F. S. Pamperin, William Wiotte.

Sylvan Water & Light Co., Sylvan, Wash.; $500; W. C. Wheeler, Edwin C. Miller and Tilson H. Bixby.

Crofton Storage Battery Co., Chicago, Ill.; $25,000; Charles B. Stafford, A. C. Crofton, J. K. Pumnelly.

Silver City Electric Light Co., Silver City, Idaho; $6,000; John Grete, Sr., John Tortiff, John Grete, Jr., Fred. Grete, Jr., George H. Handy.

Kentucky Electric Co., Ludlow, Ky.; $30,000; John Devere, Pres. and Elec. Engr., Cincinnati; J H Grieme, Ludlow; Luke Lilley, Treas., Cincinnati.

Tuolumne Power & Light Co., Sonora, Cal.; $500,000; E. A. Wiltsee, W. N. Cowles, S. Hoffman, San Francisco.

Northern Electric Co., Auburn, Me.; $120,000; Pres., George C. Wing, Auburn; Treas., Herbert I. Goss, of Berlin, N. H.; Alfred W. Fuller, Daniel J. Daily.

Hayden Electric & Mfg. Co., Cripple Creek, Colo.; $50,000; M. A. Leddy, C. E. Tschudi, E. P. Creighton, D. R. Rupp, C. W. Sells.

Central New York Light & Power Co., Little Falls, N. Y.; $400,000; has purchased and consolidated the plants at Little Falls, Herkimer and Ilion; Secy., T. E. O'Shea, Herkimer.

Maniwaki Electric Light & Power Co., Maniwaki, Que.; Chas. Logue, J. P. Tremblay.

Littleton Water Power & Light Co., Grafton, N. H.; $2,000, with $1,000 paid in; Wm. B. Hord, A. F. Dement, Hunter Wykes, New York.

Heat, Light & Power Co. of Baltimore, Baltimore, Md.; $10,000; Jos. P. Smith, Bertram S. Morrill, Jno. William Kaiser, Theo. E. Dollard.

Commercial Lighting Co., New York; $10,000; Edmund Seymour, William W. Seymour, James G. Dudley, Harry G. Strong, George W. Titcomb.

Rockford Ry., Light & Power Co., Rockford, Ill.; $250,000; F. A. Poor, N. B. Poor, R. S. Clements.

Canon City Ice, Light & Power Co., Canon City, Colo.; $100,000; H. H. Sheppards, S. M. Shattuc, H. H. Lee.

Dyea Co., Roscoe, S. Dak.; $50,000; Ashley Mears, Minneapolis, Minn.; Joseph W. Parmley, Roscoe, S. Dak.

Homer Light & Power Co., Champaign, Ill.; $6,000; M. A. Goff, S. T. Weir, F. L. Wallace.

People's Electric Light Co., Columbia, S. C., and 12 Kendall Bldg., Boston; $100,000; Frank P. Carpenter, L. Melville French, George Wallace, A. B. Carpenter, A. F. Sortwell, of Massachusetts; B. L. Abney and E. W. Robertson.

Edenton Telephone Co., Edenton, N. C.; to establish and operate a telephone system and an electric light plant; $1,500; A. T. Bush, George P. Folk, J. W. Branning, W. D. Pruden, E. B. Conger, W. J. Leary, Jr.

Stuttgart Water & Electric Co., Stuttgart, Ark.; $10,000, with $2,500 paid in; Charles Williamson, Joseph Parks, B. P. Williamson.

Rome Water Power Co., Rome, N. Y.; Geo. W. Day, W. W. Parry, Chas. C. Hopkins, C. E., Chas. W. Knight, Rome.

Electric Water Power Co., Oneonta, N. Y.; Frank D. Muller, Geo. W. Lewis, Marquis L. Keyes.

BRIDGES.

LUBEC, ME.—We are informed that this town has appointed a committee to obtain estimates for constructing a steel bridge. C. H. Clark, Chn. Com.

BOSTON, MASS.—The following local bids were received March 15 for constructing the masonry piers and abutments of the bridge on Summer St. extension across Fort Point channel:

Ross & Fowler, 28 School St. (accepted)	$79,840
H. P. Nawn, 82 Savin St.	84,400
Miller & Ellis, 17 Milk St.	84,766
Holbrook, Cabot & Daly, 1007 Tremont Bldg.	88,900
Perkins, White & Co., 81 City Square	94,500
Woodbury & Leighton, 166 Devonshire St.	103,000

ALBANY, N. Y.—Mounty & Higley, Sandy Hill, N. Y., were awarded a contract, March 22, at $2,224, for constructing steel approaches, tower, etc., on the Champlain Canal.

GLENS FALLS, N. Y.—A bill is before the assembly for the construction of a bridge over the Glens Falls feeder canal at Main St. in Sandy Hill.

SENECA FALLS, N. Y.—A bill appropriating $18,000 for the construction of a bridge over the canal has been presented to the legislature.

SYRACUSE, N. Y.—A temporary foot bridge will be constructed at Salina St., over the Erie Canal, to be used during the erection of the new hoist bridge.——A bill has passed the assembly authorizing the construction of a bridge over the canal at Catherine St., according to reports.

CAMDEN, N. J.—It is reported that the board of freeholders will take action toward the construction of a new bridge at State St., over Cooper's Creek.

MAHONEY, PA.—Reports state that the Pennsylvania R. R. Co. will repair its bridge at Boston Run, and later on replace it by a new structure.

PERRY, PA.—The people of this place have asked for a new iron bridge over the creek at Shoemakersville, to cost about $1,200.

PORTLAND, PA.—Reports state that [illegible] Person, Easton, Pa., and Jessie Thatcher, Bangor, Pa., viewers, have reported favorably for the construction of a bridge over Jacobus Creek.

RANKIN STATION, PA.—It is reported that the council awarded a contract March 15 to the Penn Bridge Co., Beaver Falls, Pa., for constructing a viaduct over the Baltimore & Ohio R. R. at Hawkins Ave.

WASHINGTON, D. C.—The district commissioners have ordered the removal of the present bridge over Rock Creek on the Argyl Mill Road, and the erection of a steel plate girder bridge in its place; estimated cost, $1,500.

CADIZ, KY.—E. Beebe informs us that bids are to be asked for constructing an iron bridge to cost about $400.

CANTON, O.—A bridge 600 ft. long will be constructed on the extension of West Lake St.

CINCINNATI, O.—A petition has been presented to the county commissioners for the constructing of a bridge over Four-Mile Creek, on the West Elkton Pike Road in St. Clair township.

CLEVELAND, O.—Bids were received by the board of park commissioners March 23 for constructing nine small steel bridges; surety, $5,000.

COLUMBUS, O.—A bill was sent to the legislature, March 18, by County Auditor Halliday, for an appropriation of about $100,000, to construct county bridges.

DAYTON, O.—The question of issuing about $250,000 in bonds for constructing bridges at West Third St. and North Main St., over the Miami River, will be voted upon at the spring election.

MIDDLETOWN, O.—Reports state that the county commissioners are contemplating the construction of a hoist bridge over the canal at Third St.

AURORA, IND.—Reports state that the bridge over South Hogan Creek will have to be replaced by a new structure.

DETROIT, MICH.—The Rapid Ry. Co. will soon let the contract for constructing a bridge about five miles long across Anchor Bay to the Flats, estimated to require about 1,500,000 ft. of timber, 60,000 ft. of piling, 3,000 tons of steel and 800,000 cu. yds. of dredging; cost, about $300,000. C. J. Reilly, Pres.

LANSING, MICH.—An election will be held April 5 to vote upon a proposition to construct a bridge across Grand River at Kalamazoo St.

MARQUETTE, MICH.—A contract was awarded March 11 to the Gillette-Herzog Mfg. Co., Minneapolis, Minn., for constructing a steel bridge over the Pilgrim River, at $1,127.

OWOSSO, MICH.—The council is reported to have disapproved of the expenditure of $18,000, the amount called for in the bids received for constructing a new bridge at Main St. and has recommended the repair of the old structure at a much less expense. Another report states that the question of constructing a bridge over the river on Main St., 134 ft. long, of two spans, estimated to cost about $15,000, will be submitted to a vote at the April election.

ROSECRANS, ILL.—Bids are asked until April 8 for constructing a steel bridge 100 ft. long by 18 ft. wide, over the O'Plain River, east of this place. J. G. Bensinger, Town Clk., Wadsworth.

CHICAGO, ILL.—Bids are asked by the sanitary district trustees until May 18 for constructing two bridges for the Atchison, Topeka & Santa Fe Ry. Co., one across the drainage canal and over the Des Plaines River and a bridge over the canal at Kenzie Ave.; surety, $4,000. James Reddick, Clk.

MANSFIELD, ILL.—Bids are asked by the highway commissioners of Blue Ridge township, until April 9, for constructing the substructure and superstructure of a 74 × 16-ft. steel highway truss bridge on masonry abutments. Only bids for the combined structure will be considered.

MINNEAPOLIS, MINN.—A contract has been awarded to McQuaid Bros. by the county commissioners for reconstructing the bridge at Gray's Lake, consisting of a 180-ft. span of combination Pratt truss, resting upon steel caissons, at about $860. E. T. Abbot, County Surv.

REDWOOD FALLS, MINN.—It is reported that this town will spend about $2,313 in improving roads and bridges.

WINONA, MINN.—The 86-ft. steel span draw bridge of the Chicago & Northwestern R. R., across the Mississippi River at this place was wrecked March 15, according to reports.

LECOMPTON, KAN.—Bids are asked by the county commissioners until April 11 for constructing a steel bridge across the Kansas River at this place. Harry Dick, County Clk., Lawrence.

LEAVENWORTH, KAN.—Bids are asked by the city clerk for the construction of a bridge at Sixth St. over Three-Mile Creek to require the following estimates: 1-320 ft. of piling, 15,000 ft. of oak, 670 cu. yds. of masonry, 450 cu. yds. of excavation; cost, $5,280.

DENVER, COLO.—Bids are asked by the board of public works until April 8 for constructing the 14th St. viaduct; estimated cost, about $300,000. Pres., S. N. Wood.

NEW WHATCOM, WASH.—Bids are asked by the county commissioners, until April 5, for constructing the Guide Meridian plank road bridge over the Nooksack River.

BUILDINGS.

BANGOR, ME.—M. C. Foster & Son, of Waterville, Me., have been awarded the contract for building a new extension to the Bangor House, at $15,973.

TORRINGTON, CONN.—It is reported that a new addition will soon be built to the church building of the Third Congregational Church, to cost about $30,500. Archs., Stephenson & Crane, 5 Beekman St., New York; Pastor, G. B. Roberts.

BROOKLYN, N. Y.—Plans have been prepared for a 3-story brick addition to the school building of the Eastern District Industrial School, on South Third St., between Bedford and Driggs Aves., to cost $40,000. Archs., Johnson & Helme, 322 Rodney St.

CANTON, N. Y.—The supervisors of St. Lawrence county have voted an appropriation of $25,000 to replace the county jail and to build a sheriff's residence and a power house.

CENTRAL ISLIP (L. I.), N. Y.—Bids are asked by Henry E. Howland, Pres. Manhattan State Hospital, 1 Madison Ave., until March 31, for furnishing a system of steam heating and for installing water supply, plumbing and drainage works for cottages Nos. 4, 5 and 6 at this place. Arch., I. G. Perry, Albany, N. Y.

NIAGARA FALLS, N. Y.—The Park Theatre Co. will build a brick theatre building in this city, to cost about $60,000. Archs., Orchard & Joralemon; Pres., Arthur Schoellkopf, Main and Pine Sts.

NEW YORK, N. Y.—Plans have been filed by Lawrence Buckley, 185 West 80th St., for a 7-story brick flat building on 103d St., near the Boulevard, to cost $60,000. Arch., Clarence True, 459 Boulevard; by Schmuck & Montag, 138th St. and 3d Ave., for three 5-story brick flat buildings on 112th St., west of St. Nicholas Ave., to cost $90,000. Arch., L. F. J. Weiher, Jr., 125th St. and Park Ave.; by Ronginsky & Perelman, 280 Broadway, for three 6-story brick flat and store buildings at 55 to 59 Willett St., to cost $75,000. Arch., M. Bernstein, 145 Centre St.; by James Livingston, 8 West 91st St., for five 4-story brick dwellings on 102d St. and West End Ave., to cost $100,000. Archs., Neville & Bagge, 217 West 125th St.; by G. H. Chamberlain, Yonkers, N. Y., for three 4-story brick flat buildings on 140th St., near Amsterdam Ave., to cost $60,000. Arch., Henry Anderson, 1180 Broadway; by Henry Zeltner Brewing Co., for ten 5-story brick flat buildings on 3d Ave. and 170th St., to cost $236,000. Arch., L. F. J. Weiher, Jr., 125th St. and Park Ave.——Robinson & Wallace, 123 East 23d St., have been awarded the general contract for erecting a 2-story store, office and cafe building, at Madison Ave. and 42d St., for Joseph Milbank, 11 Pine St. Archs., Lamb & Rich, 35 Nassau St.——The following bids were received by the park department, March 17, for the erection of buildings for the new botanical gardens, Bronx Park; (1) for all the houses; (2) houses Nos. 1, 2, 3, 4, 5, 6, 7, 13, 12, 11; (3) houses Nos. 1, 2, 3, 4, 5, 13, 12, 11; (4) houses Nos. 1, 2, 3, 4, 13, 12, 11; (5) houses Nos. 1, 2, 3, 4, 5, 6, 7; (6) houses Nos. 1, 2, 3, 4, 5, 6:

Bids Received at New York, N. Y., March 17, for Erection of Buildings in Bronx Park.

	No. 1.	No. 2.	No. 3.	No. 4.	No. 5.	No. 6.
John F. Johnson, 114 East 124th St.	$177,000	$152,000	$119,000	$107,000	$118,000	$102,000
John R. Sheehan, 101 West 75th St.	167,000	135,000	110,000	100,000	103,000	96,000
Thomas Murphy, Brooklyn, N. Y.	177,583	154,913	125,900	115,849	125,570	111,891
John H. Barker Co., 256 Broadway	159,000	136,800	113,000	101,000	111,000	133,700
John Cooper	174,850	144,500	114,500	104,500	114,000	98,500
P. J. Carlin, Brooklyn, N. Y.	189,700	154,800	129,700	119,900	123,000	104,800

NEW YORK, N. Y.—Bids are asked by the department of public charities, 66 3d Ave., until April 4, for materials and work required for alterations to Mills Building, at Bellevue Hospital grounds, foot East 26th St.; two bonds required, $2,000 each; also for materials and work required for alterations and new plumbing at Infant's Hospital, Randall's Island; two bonds required, $10,000 each.

POUGHKEEPSIE, N. Y.—The following bids were received by Frank B. Lown, Pres. Bd. Mgrs. Hudson River State Hospital, March 19, for furnishing and installing new steam mains, return mains, pumps and other work for supplying steam to the several buildings of the female department of the Hudson River State Hospital in this city:

	Item 1 to 7.	Item 8.	Item 9
Edward Joy, Syracuse, N. Y.	$6,800	$995	$2,200
Wells-Newton Co., New York	$6,645	1,233	3,964
Frank Dobson, New York	6,430	1,029	2,785
Wm. Tobin, New York	5,565	1,044	1,212
James Curran, New York	4,366	800	2,180
Gaylord & Eitapenc, Binghamton	4,385	983	1,173
Blake & Williams, New York	4,300	756	788
Smith & Co., Newburgh, N. Y.	4,373	941	1,096
E. Rutzler, New York	4,128	650	1,510
E. P. Bates, Syracuse, N. Y.	4,047	650	624

BLOOMFIELD, N. J.—At the annual town meeting held here March 15 it was decided to issue $95,000 in school district bonds. Plans have been accepted for a new school building to be erected at Essex Ave. and Baldwin St., to cost $30,000. Arch., Chas. G. Jones, 280 Broadway, New York.

JERSEY CITY, N. J.—The waiting rooms, ferry house, and station of the Pennslyvania R. R. Co., on the New Jersey side of the North River, were virtually destroyed by fire, March 21, causing a loss of about $60,000. Pres., F. Thomson, Philadelphia, Pa.

NEWARK, N. J.—Bids are asked by the council committee on public buildings, until March 30, for the mason and plumbing work, etc., required to erect and complete a building for the fire department. Archs., Hooper & Co., Market and Washington Sts.; Cy. Clk., Lewis J. Wendell.

PHILADELPHIA, PA.—It is reported that T. G. Hunter, 10th and Chestnut Sts., will erect forty 3-story brick and stone dwellings in West Philadelphia, to cost about $160,000.——Bids are being received, according to reports, for the erection of a 17-story office building to be erected at 1416 and 1420 Chestnut St., by A. H. Cooper and others, at a cost of $600,000. Archs., McCollin & Fast, 1001 Chestnut St.——The following bids were opened March 12 for building a system of vaults for the new mint building in this city: Damon Safe & Iron Works, Boston, Mass., (1) $642,132; (2) $688,602; (3) $414,958; Geo. L. Remington, Philadelphia, for storage vaults for silver dollars, $139,739; for silver bullion, $102,038; for working vault, $91,632.

PHILADELPHIA, PA. — Schermerhorn & Rembold, Archs., 430 Walnut St., have prepared plans for James A. McCurdy for a new dwelling house, 36 x 56 ft., to be built of stone, with slate roof, quarter oak finish and steam heating, at 59th St. and Overbrook Ave. Estimates will be received by the architects.

PITTSBURG, PA.—It is reported that a 6-story office building will soon be erected by the Smith estate, at 6th St. and Liberty Ave. Arch., James T. Steen, 36 6th St.

WASHINGTON, D. C.—A building permit has been issued for the construction of a Franciscan Monastery on Philadelphia St., N. E. The building will be of stone and brick, 336 x 200 ft., and is estimated to cost $135,000. Archs., Aristides Leonori & Co., Rome, Italy; Builder, John S. Larcombe.——The building commissioners have accepted the proposals of H. I. Gregory for heating and ventilating the following school buildings; 24th and F Sts., N. W., $2,590; Marshall St., $2,590.

WASHINGTON, D. C.—Bids are asked by the District Commissioners, until March 30, for reconstructing the Industrial Home School building, near Georgetown and Rockville Road.

ALEXANDRIA, VA.—Bids are asked by the supervisors of Alexandria county until March 31 for the purchase of $20,000 in bonds to be issued for the construction of a county court house and jail at Fort Meyer Heights. H. H. Young, County Clk., Alexandria.

HAMPTON, VA.—Bids are asked by the commissioners of Elizabeth City county, until March 30, for the erection of a new jail building. H. H. Holt, Deputy Clk.

FAIRMONT, W. VA.—An election will be held here on May 21, according to reports, to vote upon the question of issuing $100,000 in bonds for the construction of a new court house.

PARKERSBURG, W. VA.—The Wood county court has accepted plans and specifications for the remodeling of the court house, to cost about $50,000. Archs., Thomas & Benson, Canton, O.

CABANNIS, GA.—Reports state that a site is being located at this place for a new court house which is soon to be erected here.

DALTON, GA.—Bids are asked until May 3, as stated in a former issue, for the construction of a 2-story brick and stone jail building, with a jailor's residence. Joseph Boyle, Ordinary, of Dalton, also informs us that the building will be fireproof and heated with a hot-air furnace, and is estimated to cost about $7,000. Archs., Solucke & Stewart, 24½ Whitehall St., Atlanta, Ga.

INDIANOLA, MISS.—Bids are asked by the supervisors of Sunflower county, until April 4, for building a new court house in this town. Clk., W. P. Gresham.

CHICAGO, ILL.—A fire in this city, March 16, destroyed the building occupied by the National Music Co. and the Conover Piano Co., at Wabash Ave. and Adams St., causing a reported loss of $75,000 to the building alone. Fred. K. Ayres, of Lowell, Mass., is said to be the owner. The 6-story building adjoining, at 211 and 213 Wabash Ave., was damaged, with a total loss of about $50,000.——Press reports state that the stockholders of the Chicago Exhibition Co. have decided not to rebuild the Coliseum building, which was burned.

CHICAGO, ILL.—Bids are asked by the department of public works, until March 31, for removing the stone portico and erecting a new entrance to the City Hall, on La Salle St.; deposit required, $800. Comr., L. E. McGann. ——The Schermerhorn Building was destroyed by fire, March 21, causing a reported loss of about $300,000.——A fire in this city, March 22, damaged the 6-story building at 118 and 120 Monroe St., occupied by the Monroe Catering Co., and the Building Trades' Club; estimated loss, $90,000.

SUMMIT, ILL.—Bids are asked until April 4 for the material and labor necessary to construct a village hall. James Johnstone, Village Clk.

MILWAUKEE, WIS.—The following bids were received by the supervising architect, Washington, D. C., March 12, for automatic temperature regulating apparatus attached to the heating and ventilating apparatus of the U. S. building at Milwaukee:

Powers Regulator Co., Chicago, Ill.	$3,987	90 days
Compton Internat'l Automatic Control Co*.	6,990	60 "
Johnson Elevator Service Co., Milwaukee	3,600	90 "

*Philadelphia, Pa.

WINTON, IA.—Bids are asked until April 18 for erecting a school building at Winton. W. H. Anderson, Secy. Bd. of Education; Orff & Guilbert, Archs., Minneapolis, Minn.

ATWATER, MINN.—Bids are asked until April 18 for the erection of a school building in Independence School District No. 37; bond required, $7,500. Peter Larson, Clk. Bd. of Education; Orff & Guilbert, Archs., Lumber Exchange, Minneapolis, Minn.

GLENCOE, MINN.—Bids are asked until April 14 for the erection of a jail building, and also for the steel and iron work for the same. F. D. Stocking, County Audr.; Pass & Schippel, Archs., Mankato, Minn.

RED WING, MINN.—It is reported that at the spring election to be held on April 25 the question of issuing $15,000 in bonds for erecting an armory and city hall building will be voted upon.

SOUTH OMAHA, NEB.—The following bids were received by the supervising architect, Washington, D. C., March 18, for plaster model required for the ornamental work in the U. S. Building in this city; C. W. Buhler, Washington, D. C., $918, 48 days; J. F. Early, Washington, D. C., $460, 45 days; G. W. Starr & Son, Baltimore, Md., $435, 60 days; Wm. A. Gault & Son, Baltimore, Md., $1,417, 4 months; H. J. Ellicott, Washington, D. C., $770, 51 days.

ANACONDA, MONT.—Bids are asked until April 19 for the purchase of $100,000 of coupon bonds to be issued by Deer Lodge county for the purpose of building a new court house and jail. M. J. Martin, County Clk.

KANSAS CITY, MO.—The design of Frederick E. Hill, New York Life Building, has been accepted for the new auditorium building to be erected at 13th and Central Sts., at an estimated cost of $97,000.

KANSAS CITY, MO.—Bids are asked by A. Van Brunt, Architect, Telephone Bldg., until April 4, for the construction of steel and iron cells in the Jackson county jail.

ST. LOUIS, MO.—A fire in this city, March 18, destroyed the warehouse of May, Stern & Co., near Olive and 18th Sts., causing a loss of about $50,000.

GIDDINGS, TEX.—Bids are asked, until April 12, for erecting a 3-story brick and stone fireproof courthouse and a steel vault. Arch., J. R. Gordon, San Antonio, Tex.; County Judge, I. H. Bowers.

ORANGE, TEX.—McKnight & Robinson were awarded the contract, March 15, for erecting the new court house, at $28,300.

COLORADO SPRINGS, COLO.—A fire in this city, March 22, destroyed the Woodside Hotel, a large frame building, causing a loss of about $120,000.

SPOKANE, WASH.—The following bids have been received by the board of education for constructing a 10-room school building on Division St.: A. Isle, $31,947; Oliver Bros., $24,000; D. B. Fotheringham, $23,300; P. Hughes Co., $21,950; Geo. McKenzie, $25,000; Huber & Huetter, $28,972; and M. L. Peterson & Co., $25,789.

DECOTO, CAL.—R. P. Hurlburt, of San Francisco, Cal., has secured the contract for the construction of the Masonic home to be built at Decoto, at a cost of $33,600. It is said that work will be commenced immediately.

SAN FRANCISCO, CAL.—Plans and specifications are asked by the supervisors of San Francisco county, until Sept. 12, for a hospital building to be erected in this city at a cost of about $300,000. John A. Russell, Clk. Bd.

COALVILLE, UTAH.—T. L. Allen, Mayor, informs us that the erection of a new jail building in this city is contemplated.

BELEM, BRAZIL.—Bids are asked by the department of municipal administration of this city until July 21 for the construction and working of cattle pens, a slaughter house, two markets and two avenues. Secy., J. Coelho.

WATER-WORKS.

FARMINGTON, ME.—Frank W. Butler, Attorney, writes us that a movement is being made to purchase the works of the Farmington Water Co., all its rights, etc., for the city. The committee consists of Geo. W. Wheeler, F. W. Butler and J. C. Tarbox.

FRIENDSHIP, ME.—Elmer Jameson, Warren, Me., is reported as making arrangements to construct works in this place during the spring.

KINGFIELD, ME.—Bids are asked by the Kingfield Water Co., until April 20, for constructing works. Engr., Chas. N. Taylor, Natick, Mass.

BOSTON, MASS.—Bids are asked until March 28 for furnishing the water department with castings, as stated in our advertising columns. John A. Murphy, Water Comr.

WAYLAND, MASS.—W. W. Wight is reported to have submitted estimates for works for Wayland Center to cost about $23,000.

HAYDENVILLE, MASS.—H. C. Smith, Chn. Selectmen, Williamsburg, writes us that no bids have yet been asked for constructing the works. C. S. Damon, John O'Neil and C. B. Hosford are on the committee.

LENOXDALE, MASS.—The Berkshire Water Co., Berkshire, Mass., is considering the question of extending its works to this place.

NEEDHAM, MASS.—The commissioners have been directed to ask the legislature for permission to issue $50,000 in bonds for increasing the water supply.

SALEM, MASS.—M. J. Drummond & Co., 192 Broadway, New York, are reported to have been awarded the contract for furnishing 200 tons of water pipe. The work of laying the pipe will be begun as soon as it is delivered.

WATERTOWN, MASS.—Bennett F. Davenport, Chn. Water Com., writes us that the committee is negotiating with the Watertown Water Supply Co. for the price to be paid for the works which the town has taken. A board of water commissioners will probably be elected at the coming annual town meeting out of the present cimmittee. This committee has full authority to determine and pay the price to the company without further action by the town. By statute, however, the limit is one-tenth the valuation of the town, which is $10,000,000. The works will be connected with the Metropolitan water system. Supt., J. H. Perkins.

WILLIAMSBURG, MASS.—G. M. Bradford writes us that the question of building works is still being considered, but there is no immediate prospects of the plant being built.

TIVERTON, R. I.—Geo. R. Lawton, of the committee, writes us that it has not been decided when the town will begin the construction of the proposed works, the supply to be from Stafford Pond. Population, 3,000. Des. Engrs., Hawes & Marrell, Fall River, Mass.

WESTERLY, R. I.—We are informed that a few small extensions will be made to the works by the town by day labor. The material is all on hand. Engr., Samuel M. Gray, Providence, R. I.; L. W. Arnold and Dr. E. R. Lewis, Water Comrs.

AUBURN, N. Y.—The water board has decided to lay 16,550 ft. of 12 and 18-in. mains in a number of streets. The contract for furnishing 550 tons of pipe has been let to the Warren Foundry & Machine Co., 160 Broadway, New York.

BOLIVAR, N. Y.—The board of trustees elected March 15 is said to be in favor of granting a franchise for works to a local company. Estimated cost, $12,000. Alex. Wilson, Pres.

CATTARAUGUS, N. Y.—This town voted March 15 to extend the works at a cost of $7,000. Supt., Chas. Babcock.

CHARLOTTE, N. Y.—This place voted March 15 to issue $25,000 in bonds for works. Geo. P. Goulding, Pres. J. M. Allen, Comr.

HOLLAND PATENT, N. Y.—S. N. Pride, Clk., writes us that this place voted March 15 against issuing $12,000 in bonds for works.

MIDDLETOWN, N. Y.—On March 18 this town voted 271 for and 220 against granting the commissioners an appropriation of $175,000 for increasing the water supply. W. D. Stratton, Chn. Comrs.

MONTOUR FALLS, N. Y.—Dr. Geo. M. Post, Pres., writes us that this place voted March 15 in favor of works. No further action has been taken.

OGDENSBURG, N. Y.—H. A. Lord, Supt. Water-Works, writes us that the following bids were received March 16 for furnishing a 4,000,000-gallon pump:

Deane Steam Pump Co., Holyoke, Mass.	$12,285
Holly Mfg. Co., Lockport, N. Y.	[1]10,780
Holly Mfg. Co., Lockport, N. Y.	[2]9,800
Loretz & Son, New York	9,750
Henry R. Worthington, New York	9,000
Hughes Steam Pump Co., Cleveland, O.	8,490
Lang-Goodhue Mfg. Co., Burlington, Vt. (accptd.)	8,850
Edward P. Allis Co., Milwaukee, Wis.	8,000

[1] 36-in. stroke machine; [2] 30-in. stroke machine.

PAINTED POST, N. Y.—This place is reported to have again voted against constructing works. Pres., Jas. C. Orr.

PITTSFORD, N. Y.—P. D. Carpenter, Pres. Bd. Water Comrs., writes us that the proposed works will require 271 tons of pipe, 36 hydrants, a reservoir, power pump, gasoline or oil engine, etc.; estimated cost, $12,000. It is probable that bids will soon be asked. Des. Engr., Paul Voorhees, 1210 Guaranty Bldg., Buffalo.

PRATTSBURG, N. Y.—This place has voted to build works to cost about $15,000, acording to reports. Engr., J. F. Witmer, 705 Ellicott Square, Buffalo.

SCHENECTADY, N. Y.—We are informed that it is proposed to issue $21,000 in bonds for two new houses at the pumping plant, which is three miles distant, and for laying mains, etc. L. B. Sebring, Cy. Engr.; E. Nott Schermerhorn and D. C. Smith are on the committee. Supt., Geo. T. Ingersoll.

SEA CLIFF (L. I.), N. Y.—The Sea Cliff Water Co. of New York city, has been incorporated to supply Sea Cliff and Oyster Bay with water; capital stock, $25,000; directors: John T. Pirie, S. C. Pirie, John T. Pirie, Jr., J. D. Weir, Sea Cliff; John K. Myers, New Rochelle, N. Y.; John H. McQuillan, Brooklyn, and Milton S. Bond, Westfield, N. J.

SYRACUSE, N. Y.—Bids are asked until March 25 for the purchase of $100,000 of 3½% water bonds. E. F. Allen, Cy. Treas.

COLLINGWOOD, N. J.—The Collingwood Water Co. has been incorporated with a capital stock of $50,000, by George Lippincott, Howard L. Merrick and William J. McDevit, of Collingwood; G. Franklin Davis, of Haddonfield, N. J.; George W. Stoker and Edward Ambler Armstrong, of Camden, N. J., and Frederick Lengenheim, of Ardmore, Pa. The incorporators are interested in the present company, the works for which were built in 1891.

DEALBEACH, N. J.—The Deal Water Co. has been incorporated by Daniel C. McManus, Richmond, S. I., N. Y.; Lawrence T. Fell, Jr., Orange, N. J., and others; capital stock, $150,000, with $2,000 paid in.

JERSEY CITY, N. J.—M. J. Drummond & Co., 192 Broadway, New York, have been awarded the contract for furnishing this city with the necessary cast iron water pipe during the year.

RIDGEWOOD, N. J.—Bids are asked until May 25 for furnishing a water supply and for building works, as stated in our advertising columns. M. T. Richardson, Secy. Water Com., writes us that the village has decided against municipal ownership of water-works and in favor of some private company putting in the works, with an option on the part of the village to purchase within 10 years. H. E. Ward, Village Clk.; Jas. Cornelius, Pres. Trustees.

BARNESVILLE, PA.—This place will vote April 4 on the question of granting a franchise for works to J. H. McCrady, Braddock, Pa., and Jos. Hastings, Allegheny, Pa.

BEAVER FALLS, PA.—John Warren, Secy. People's Water Co., writes us as follows regarding new works for this place: The project of building a new water-works in the borough of Beaver Falls had its inception in the impure quality and inadequate supply furnished by the old company, the right of the borough to build its own plant, without first buying the old works, having been denied by the Supreme Court of this state. Some time since a charter was granted to the People's Water Co. of Beaver Falls. Contracts have been entered into with the National Foundry & Pipe Works, of Scottdale, Pa., for furnishing all the pipe for the new works, and with Funkhouser & Coates, of New Brighton, Pa., for laying the same. Also with Knott, Harker & Co., of Beaver Falls, for hydrants. The contracts for the pumps, pumphouse and reservoir have not yet been let. Operations have been suspended pending the decision of the Supreme Court as to whether the borough has the right to enter into a contract with the People's Water Co. for furnishing water for borough purposes.

CHESTER, PA.—The New Chester Water Co. will extend the mains, etc., for a better water supply, accordnig to local papers. Treas. and Owner, Walter Wood.

OIL CITY, PA.—The council has voted to ask for new bids for furnishing a new 3,000,000-gallon pump at the works. Councilman Eckmeder may be addressed.

PARNASSUS, PA.—E. D. Cree, Clk., writes us that specifications and plans for works and a sewerage system are not yet ready. It will be at least 30 days before bids will be asked; estimated cost, $17,000. Engr., S. A. Taylor, 330 Fifth Ave., Pittsburg.

PITTSBURG, PA.—Bids are asked until March 25 for furnishing and placing screens in pump well and for placing tie bolts in engines at the Brilliant pumping station. Edward M. Bigelow, Dept. Pub. Wks.——The Clinton Iron & Steel Co. has started work on a large tunnel which is to supply the plant with water from the Monongahela River. A pump house will be erected at the upper end of the tunnel 300 ft. from the water's edge. A cofferdam will be constructed about 75 ft. from the shore where the river's bed is to be tapped. Estimated cost, $27,000.

PITTSBURG, PA.—Bids are asked until March 31 for furnishing as required for one year cast-iron water-pipe, special castings, lead pipe, pig lead, gate valves, fire hydrants, gate boxes, etc. E. M. Bigelow, Dir. Dept. Pub. Wks.

WEST CONSHOHOCKEN, PA.—R. P. Davis, Burgess, writes us that the West Conshohocken Water Co. is to put in works, the borough having contracted to take a quantity of water. The company has made arrangements for pipe, hydrants, valves, etc., and for laying same and building reservoir. F. B. Jacobus, Chn. Water Com.

OAKLAND, MD.—This place voted March 14 to issue $30,000 in bonds for works and a light plant. Mayor, R. S. Jamison.

WASHINGTON, D. C.—The Senate has passed a bill authorizing the completion of the aqueduct tunnel and appropriating $587,765 for the purpose.

BERRYVILLE, VA.—Henry L. Cook, Pres. and Supt. Royal Water Co., Front Royal, Va., has submitted estimates for completing the works begun here in 1891. About $23,000 was spent on the works and it is said that at least $20,000 will be required to complete it. An election will probably be held to vote on the question of issuing the necessary bonds.

BRISTOL, VA.—S. B. Geiger, Chicago, Ill., is reported to have been awarded the contract for sinking an artesian well 1,200 ft. at $3.25 a ft. It is hoped to secure a supply of 24,000 gallons a day. H. G. Peters, Chn. Com.

ROCK HILL, S. C.—Bids are asked for about 30 days for furnishing this place with water, as stated in our advertising columns. R. Lee Kerr, Chn. Water Com.

BUENA VISTA, GA.—The council will probably soon let a contract for securing water from springs about three-fourths of a mile distant. The project to secure water from an artesian well has been abandoned.

FITZGERALD, GA.—Bids are asked until April 4 for the purchase of $33,000 of 30-year 6% water and light bonds, for the improvements noted in our last issue. C. C. Goodnow, Mayor.

PERRY, GA.—J. H. Hedges, Clk., writes us that there is only a proposition to organize a company to supply this place with water. Population, 1,200. Address E. B. Wells, Peyton, Ga.; Mayor, E. W. Killen.

TAMPA, FLA.—The question of issuing $300,000 in bonds for either the purchase of the works of the Tampa Water-Works Co. or of building a new plant will be voted upon May 3, according to reports.

MONROEVILLE, ALA.—The question of building works is reported as being considered.

OPELIKA, ALA.—We are informed that James A. Dilbridge, of Notasulga, Ala., wants prices on hydraulic rams that will drive 3,000 gallons of water 900 ft. to a height of 75 ft. a day, a gasoline engine and pump to deliver 3,000 gallons with the above conditions in six hours. Address S. M. Puckett, Opelika.

McCOMB, MISS.—C. C. Jarvis, Mayor, has visited a number of towns inspecting the works with a view to constructing works in this place. Sanders & Porter, Engrs., Columbia Bldg., Louisville, Ky., and Brookhaven.

MEMPHIS, TENN.—John Lundie, The Rookery, Chicago, has been engaged by the city to report on the value and condition of the works of the Artesian Water Co., as to the collection of water from wells and the permanency of the supply, and also as to the condition of the distribution system, including the pumping station. Thos. T. Johnston, Consult. Engr., Security Bldg., Chicago, has been engaged by the water company.

TRENTON, TENN.—This place voted March 10 in favor of city ownership of the works and light plant; estimated cost, $25,000.

TULLAHOMA, TENN.—The council will consider the question on March 28 of granting a franchise for works to R. P. Houston, Pittsburg, Pa., and Robt. Gallagher, of Shelbyville, Tenn.

SPRINGFIELD, KY.—J. A. Holmboe, 9th and Jefferson Sts., Louisville, Ky., who has been granted a franchise for works, wishes to purchase material at once; estimated cost, about $20,000.

CINCINNATI, O.—Bids are asked until April 28 for constructing an intake pier, tunnel and pump pit for the Eastern pumping station, near California, O.; bond, $10,000; estimated cost, about $450,000. Chas. G. Roth, Clk., Water Comrs.

GERMANTOWN, O.—Mayor Frank writes us that nothing is likely to be done in regard to water-works. Population, 1,800.

ADRIAN, MICH.—It is stated that the works of the Adrian Water-Works Co. will be improved at once. Pres., W. H. Hand.

BOYNE FALLS, MICH.—This place voted March 14 to issue $4,000 in bonds for works. Town Clk., Edward Painter.

CASS CITY, MICH.—This place is reported to have voted March 14 for works and a light plant. Pres., J. H. Striffler; Councilman Adam Muck may be addressed.

CHELSEA, MICH.—This place voted March 14 for works and a light plant, according to reports. The present plant owned by F. P. Glazier is for fire protection only. Population (1890), 1,356.

ST. CLAIR, MICH.—C. J. Streit, Supt., writes us that bids were asked until March 19 for extending the intake pipe about 800 ft.

SAULT STE. MARIE, MICH.—H. C. Thompson, Cy. Engr., writes us that a new pumping station will be erected this season. It will also contain the proposed electric plant, noted under its respective heading.

CHICAGO, ILL.—Bids are asked until March 29 for constructing new engine foundations for the 68th St. pumping station; check, $500. L. E. McGann, Comr. Pub. Wks.

MINERAL POINT, WIS.—Bids are asked until April 19 for furnishing the material and for constructing works, as stated in our advertising columns. Cy. Clk., H. S. Weil; Mayor, Guy P. Cobb.

DES MOINES, IA.—John W. Hill, 39 Glenn Bldg., Cincinnati, O., has been engaged by the council to complete plans for the proposed municipal works.

DUBUQUE, IA.—E. C. Drake, Cy. Engr., estimates the value of the works of the Dubuque Water Co. at $260,000, and that it will cost this amount to duplicate the works.

NEW SHARON, IA.—This place will vote March 28 on the question of issuing $8,500 in bonds for works.

BARNESVILLE, MINN.—This place is reported as arranging to issue bonds for works, etc. Chas. Marden, Cy. Attorney.

McPHERSON, KAN.—G. T. Wise, Hutchison, Kan., is reported to have been appointed receiver of the Western Water & Electric Co.

PARSONS, KAN.—The question of purchasing the works of the Parsons Water Co. for $185,000 will be voted upon by the people.

OMAHA, NEB.—The Omaha Water Co. has awarded the contract for furnishing a 20,000,000-gallon low-pressure pumping engine to the Edward P. Allis Co., Milwaukee. A new building will be built, and together with the pump will cost about $80,000. The mains will be extended and other improvements made at a cost of about $300,000. Archs., Fisher & Lavine, Omaha; Mgr., E. L. Bierbower.

TECUMSEH, NEB.—E. H. Grist, Chn. Com., writes us that it is proposed to sink a new well; no pipe will be required.

TRIPP, S. DAK.—Bids are asked until about April 16 for the purchase of $5,000 of 6% 20-year bonds for the proposed works, according to reports.

BUTTE CITY, MONT.—It is stated that the Butte City Water Co. has let a contract to Winters, Parsons & Boomer at $30,000 to construct a settling and auxiliary reservoir 1½ miles above the dam of the main reservoir. It is to be finished by June 15 and will have a capacity of 100,000,000 gallons. The muddy water from the spring freshets will be caught in the new reservoir and allowed to settle before it passes into the old one. The main reservoir has a capacity of 180,000,000 gallons. Supt., Eugene Carroll.

ST. LOUIS, MO.—It is proposed to appropriate $32,000 for laying water pipe and $90,000 for extending the works. E. S. Foster, Secy. Bd. Pub. Improvements.

MENA, ARK.—W. W. Whitley, Town Clk., writes us that the city intends to erect works. The source of supply has not been decided upon. The works will probably require a stand-pipe or tank of 75,000 gallons capacity, and a main pipe about a mile long. W. A. Reese, Chn. Com.

STUTTGART, ARK.—The Stuttgart Water & Electric Co. has been incorporated with a capital stock of $10,000 by Chas. Williamson, Jos. Parks and others. Last week we stated that Mr. Williamson had been granted a 33-year franchise.

CORPUS CHRISTI, TEX.—J. S. Henderson, Secy., writes us that the Corpus Christi Water Supply Co. has awarded a contract to H. R. Suterland for constructing a dam across the Nueces River. Work has been begun. The dam will have cypress piling, two rows, the interval filled with rock and sand. The dam is for the purpose of preventing the influx of salt water driven up stream by trade winds.

ITALY, TEX.—The Italy Water Co. is reported as wanting to purchase a stand-pipe, pumps, mains, etc. Secy., Leon Levy.

TEMPLE, TEX.—We are informed that the Temple Natatorium Co. has not yet let contracts for sinking artesian wells for a new supply. It has not yet been determined the kind of pumping machinery to be used. Arrangements will be made to add to the flowing capacity of the well, now furnishing about 80,000 gallons a day. It is not known whether an automatic pumping system or a stand-pipe will be used. Mgr., W. A. Barclay.

SWEETWATER, TEX.—The question of building works is reported as being considered.

SPOKANE, WASH.—It is proposed to purchase another 4,000,000-gallon pump. Extensions to the mains are also proposed, as noted in our issue of last week. B. W. Fowle, Secy. Bd. Pub. Wks.

TACOMA, WASH.—Frank L. Davis, Cy. Engr., writes us that the city will probably lay about three miles of new water main, to be mostly 4 ins. in diameter.

ANTELOPE, ORE.—We are informed that bids will soon be asked for laying three-fourths of a mile of ¾-in. pipe from the springs to a reservoir and a half-mile of 3-in. pipe into the town. F. M. Dial, Chn. Com.; Des. Engr., J. B. Goit, The Dalles, Ore.

COLTON, CAL.—This place will, it is stated, issue $16,000 in bonds for a new pump, mains, reservoir, etc., for extending the works. Des. Engr., J. B. Pope, Anderson Block, San Bernardino, Cal.; D. Johnston, Cy. Clk.

SANTA ANA, CAL.—It is stated that a centrifugal pump will be installed at the works to pump 1,500 gallons a minute. Ch. Pump Engr., E. D. Atwood.

RENO, NEV.—Bids are asked until April 11 for the purchase of $130,000 of 6% bonds for the proposed works. F. B. Porter, Cy. Clk.; R. S. Osburn, Pres. Council.

MONROE, UTAH.—It is stated that this place will issue $5,000 in bonds for works.

PRICE, UTAH.—C. W. Allerd has been appointed receiver for the Price Water Co., according to reports.

CARLETON, N. B.—The board of management is considering the question of securing a full supply of water for this place.

TORONTO, ONT.—Bids are asked until March 30 for furnishing 104 ft. of 20-in. steel plate riveted pipe, etc. John Shaw, Mayor.

ASHCROFT, B. C.—We are informed that the Ashcroft Water-Works Co., Ltd., wants bids for furnishing pumping and electric light machinery. John Shields, Ashcroft, may be addressed.

SHANGHAI, CHINA.—Press reports state that the Laidlaw-Dunn-Gordon Co., Cincinnati, O., has been asked to send an engineer to this country to prepare plans for works for one of the smaller inland cities. It is said that 600 tons of pipe for the works have been contracted for.

IRRIGATION.

MITCHELL, NEB.—Bids are asked by the directors of the Mitchell irrigation district for enlarging the Mitchell canal from the headgate down to the junction with the Gering canal, according to reports.

SAN BERNARDINO, CAL.—J. W. Lansing proposes to construct two dams in the Mojave River to reclaim about 75,000 acres of land by irrigation, according to reports.

OROVILLE, CAL.—It is reported that the Oroville Water Co. will hold a meeting April 11 to consider the question of issuing $70,000 in bonds for the purchase of the Miocene Ditch System.

NEW COMPANIES.—Colorado Bijou Land & Irrigation Co., Charleston, W. Va.; $1,250,000, with $50 paid in, to build and operate ditches, canals and reservoirs; E. L. Squire, W. A. Forsythe, L. A. Martin, S. W. Nichols, S. J. Proctor, Charleston, W. Va.

Interstate Canal & Power Co., Oxford, Idaho; $100,000; George C. Parkinson, Chester Call, D. D. Sullivan, F. H. Reddish, W. H. Hyde, W. F. Fisher, F. N. Woolley, Hyrum Jenson.

Crystal Springs Irrigation & Power Co., Klamath, Ore.; $1,000; L. A. Lewis, H. D. Stout, C. C. Lewis, Klamath Falls.

Animas Land & Irrigation Co., St. Louis, Mo.; $250,000; Carrie A. Erwin, U. G. Osborn, Jas. Holmes, W. M. Hirall, J. N. Bofinger, St. Louis.

Snow Irrigation Co., Sterling City, Tex.; $5,000; S. H. Snow, G. M. Garrett, M. E. Flowers.

New Cache La Poudre Irrigation Co., Greeley, Colo.; $100,000; H. C. Watson, F. H. Badger, John E. Law, J. D. Cornell and W. H. H. Bliss.

Oldham Ditch & Reservoir Co., Grand Junction, Colo.; to manage and control the Oldham Brothers' Cottonwood Irrigating Outfit in Mesa county; $24,000; Elihu S. Oldham, William Oldham, S. B. Hutchinson.

Colonia Irrigation Co., Susanville, Cal.; $800,000, with $441,450 paid in; Wm. E. Smythe, New York; E. T. Purser, Healdsburg; H. R. T. Coffin, Jules Alexander, J. E. Pardee, Susanville, Cal.

Highland Water Co., Riverside, Cal.; $200,000; to irrigate land lying above the Gage canal. Idea is to develop water by means of artesian wells between San Bernardino and Redlands. This water will be raised from 30 to 40 ft. by means of electricity, and it is believed that between 500 and 800 ins. can be developed; E. A. Chase, C. R. Gray, A. K. Butler, W. M. De Barry.

Riverside Ditch Co., Riverside, Cal.; $5,000, with $750 paid in; John Lagurstrom, A. G. Erickson, J. F. Gilbert, C. J. Anderson, Olot Olson, Reeley.

Shasta Water Co., San Francisco, Cal.; $100,000, with $20,080 paid in; A. Andrew, P. C. Hale, J. H. Harbour, H. L. Worrisin, G. E. Bates, San Francisco.

Kaysville Irrigation Co., Kaysville, Utah.; $39,500; to construct reservoirs, dams, canals and ditches for irrigating purposes; T. F. Roueche, Hyrum Strong, J. G. M. Barnes, Henry M. Blood, Wm. Beesley.

Moses Lake Irrigation Co., Seattle, Wash.; $1,000,000; Edward P. Palmer, J. D. McIntyre, D. B. Strickler.

Bonanza Power & Land Co., Pocatello, Idaho; $500,000; ex-Governor Rickards, Montana; ex-Lieutenant-Governor Bierbower, Idaho; J. P. Perrine, Joseph Wildron, Shoshone, Idaho; F. B. Thomas, J. J. Cusick, Butte. The company now owns an extensive tract of land near American Falls and is building an irrigation ditch to water it.

SEWERAGE.

BAR HARBOR, ME.—This place has voted to spend $10,000 for sewers. S. N. Rich, Salisbury, Me., may give informaton.

BENNINGTON, VT.—The trustees have been authorized to extend the system.

HULL, MASS.—James Jeffrey, Town Clk., writes us that $7,000 has been appropriated for sewers. No bids have yet been received. The work will be begun at once. Des. Engr., Ernest W. Bowditch, 60 Devonshire St., Boston; Chn. Com., F. M. Reynolds.

WORCESTER, MASS.—Harrison P. Eddy, Supt. Sewers, informs us that the following bids were received March 21 for constructing filter press buildings at the purification works; all local bidders:

J. Edward Fuller Jr., 452 Main St. (accepted)	$11,635
E. J. Cross, 31 Shattuck St.	11,780
J. W. Bishop & Co., 107 Foster St.	11,986
Henry Mellen & Son	12,295
Webb Granite & Construction Co., 44 Front St	12,500
Norwood & Morton, 306 Main St.	12,825
Urfiel Jacques, 13 Blackstone St.	13,310
McIntyre & Mack, 371 Main St.	13,722
W. A, Beaudette, 8 Norwich St.	14,160

LEXINGTON, MASS.—Leonard A. Saville, Town Clk., writes us that nothing has yet been done by the committee in regard to the proposed system, except to organize. Robt. P. Clapp, Chn.

MILTON, MASS.—Bids are asked until April 2 for building about 1½ miles of pipe sewers; check, $1,000. Brick, pipe, cement and castings will be furnished by the town. W. F. Bates, Town Engr.

HARTFORD, CONN.—Bids are asked, until March 30, for constructing sewers in two streets. C. H. Northam, Pres. St. Comrs.

MERIDEN, CONN.—H. T. Clark, Secy. Bd. Pub. Wks., writes us that it is proposed to lay about 20,000 ft. of sewers this year. Specifications are now being sent out. The work will probably begin about April 1. W. S. Clark, Cy. Engr.

ROCKVILLE, CONN.—It is stated that surveys are being made for the completion of the system.

DOLGEVILLE, N. Y.—Theo. H. Roth, Chn. Comrs., writes us that this place voted March 15 against constructing a system.

SAG HARBOR (L. I.), N. Y.—E. J. Beckwith writes us that a meeting has been called for April 4 to vote on the question of constructing a system. Population, 3,100. F. H. Palmer, Pres.

SYRACUSE, N. Y.—Bids are asked until March 28, for constructing 18 to 12-in. pipe sewers in a number of streets. M. Z. Haven, Cy. Clk.

DEAL, N. J.—The Deal Sewer Co. has been incorporated with a capital stock of $100,000, of which $2,000 is paid in; incorporators: Daniel C. McManus, Richmond, S. I., N. Y.; H. J. Laurence, T. Fell, Jr., Orange, N. J.

ELIZABETH, N. J.—Matthew Wade has been awarded the contract for constructing a sewer in Broad St. to the Elizabeth River, at $6,995.

NEW BRUNSWICK, N. J.—We are informed that it is probable that a sewer will be constructed in the 6th ward.

PATERSON, N. J.—Wm. Ferguson, Cy. Engr., writes us that it is proposed to construct 2,100 ft. of 30-in. brick sewer, at a cost of $9,000; average cut, 15 ft.; 1,000 ft. of 24-in. brick sewer at a cost of $3,500, average cut, 11 ft., and 7,950 ft. of 18 to 12-in. pipe sewer at a cost of $16,000, average cut, 11 ft.

PARNASSUS, PA.—E. D. Cree, Clk., writes us that specifications and plans for a system and water-works to cost about $27,000 are not yet ready. Bids will not be opened for at least 30 days. Des. Engr., S. A. Taylor, 330 Fifth Ave., Pittsburg.

SUNBURY, PA.—The question of issuing $10,000 of 4% bonds for sewers is being considered. P. H. Moore, Burgess, writes us that 1,000 ft. of pipe will be laid and 1,000 sq. yds. of street paved. C. J. Callahan is on the committee.

WASHINGTON, D. C.—The district commissioners have authorized the construction of 12, 21 and 24-in. pipe sewers in sundry streets, at an estimated cost of $4,660.

AUGUSTA, GA.—The council has voted to construct 12 and 15-in. pipe sewers in two streets at a cost of about $3,300. Patrick Walsh, Mayor.

WAYCROSS, GA.—R. P. Bird, Clk. Council, writes us that the question of ratifying the bill passed by the legislature in November authorizing this place to issue $30,000 in bonds for sewers has not been submitted to the people.

NEWPORT, KY.—The council is considering the question of extending the system and will act on the same in a month. W. L. Glazier, Cy. Clk.

BELLEFONTAINE, O.—The committee has recommended the issuance of $30,000 in bonds for a system. Robt. Lamb, Chn.

CAMBRIDGE, O.—At the election April 4 this city will vote on the question of issuing $9,000 in bonds for constructing trunk sewers. It is proposed to construct sewers in Steubenville Ave., Wheeling Ave. and other streets at a cost, with the trunk sewer, of about $23,700. Consult. Engr., A. L. White, Cy. Hall, Wheeling, W. Va.; Cy. Engr., O. M. Hoge; Mayor, H. W. Luccock.

CANTON, O.—Applications will be made to the legislature for authority to issue $75,000 in bonds for sewers in Schrivers Run. L. E. Chapin, Cy. Engr.

NORTH BAY CITY, MICH.—It is proposed to construct a 12-in. pipe sewer in Linn St. G. L. Lusk, Cy. Clk.

CHICAGO, ILL.—Bids are asked, until April 13, for constructing the Lawrence Ave. and 39th St. conduits of the intercepting sewer system. The estimated cost of the two conduits is $1,500,000. L. E. McGann, Comr. Pub. Wks. —Five miles of 12-in. tile sewers in Woodlawn, built before annexation, and now in a state of partial collapse, must be taken up and replaced with brick sewers to properly drain the territory. The work will cost about $125,000, and be paid for by special assessment. Plans for the improvement are being prepared.

BELOIT, WIS.—The council has voted to construct a system. A sixth of the city will be furnished each year. The first section will cost $15,000.

BARNESVILLE, MINN.—It is stated that this place is arranging to construct a system, water-works and a light plant.

ANACONDA, MONT.—The council has ordered the construction of 5,420 ft. of 10 and 8-in. pipe sewer in 4th Ave. Mayor Leiser may be addressed.

ST. JOSEPH, MO.—Bids are asked, until April 7, for constructing sewers, drains, curbing, macadamizing, etc., in the Asylum Road. Theo. Steinacker, County Surv.

GUTHRIE, OKLA.—The question of building a system is being urged by the Guthrie Club.

SPOKANE, WASH.—Peter Costello has been awarded the contract at $8,974 for constructing a 15-in. pipe sewer in Riverside Ave.

PASADENA, CAL.—Herman Dyer, Cy. Clk., writes us that the people may vote on the question of issuing $178,000 in bonds for a system. Calvin Hartwell, Pres. Trustees.

GARBAGE DISPOSAL—STREET CLEANING.

NEWPORT, R. I.—The question of building a crematory is being considered.

ATLANTIC CITY, N. J.—Thos. Dark, Sr., Buffalo, N. Y., is reported by Buffalo papers to have been asked by the council of this city to prepare plans for a crematory.

PLAINFIELD, N. J.—The time for the sale of the crematory of the Plainfield Sanitary Co. has been postponed to April 1. The plant is the Smith-Vivartass system. Andrew Love, Sr., Receiver, Plainfield.

SEWICKLY, PA.—J. A. Knox, Clk., writes us that it will be a month before new work for this year is considered. Dr. White is on the garbage disposal committee.

WHEELING, W. VA.—The proposed plant to be erected by B. F. Howland will be placed on ground adjoining the present municipal plant.

MEMPHIS, TENN.—It is probable that the Dixon Crematory Co., Findlay, O., will be awarded the contract for furnishing two crematories at $7,000 each. Dr. Heber Jones, Pres. Bd. of Health.

CLEVELAND, O.—The Buckeye Refuse & Destruction Co., recently awarded the 5-year garbage disposal contract, will begin at once on the construction of its plant on land at Independence, about four miles from the city.

TOLEDO, O.—D. J. O'Hara has been awarded the contract for collecting the garbage for five years, at $12,000 a year. An entire new equipment will be required. This and other bids were given in our issue of March 3.——The council has appointed Councilman Roulet, Meissner and Abele a committee to prepare a petition asking the legisture for permission to grant this city authority to issue bonds for erecting a plant.——The Smead Cremating & Power Co. has been incorporated by H.W. Compton, Frank Gorman, F. L. Fuller, A. K. Detwiler and George B. Boone, with a capital stock of $100,000.

YOUNGSTOWN, O.—Bids are reported as wanted by the city commissioners for constructing a Dixon plant. The building will be 52 ft. square and two stories high.

CHICAGO, ILL.—L. E. McGann, Comr. Pub. Wks., has decided to have the city collect and dispose of the garbage. This is a result of Judge Tuley's decision declaring invalid the 5-year garbage contracts made last year.

ALAMEDA, CAL.—The National Sanitation Co. has submitted a proposition to the trustees to collect and dispose of the garbage of the city.

ABERDEEN, ONT.—The question of constructing a crematory is reported as being considered.

MONTREAL, QUE.—Bids are asked until March 28 for the removal and disposal of the night soil, dead animals, etc. L. O. David, Cy. Clk.

STREETS AND ROADS.

BAR HARBOR, ME.—The council proposes to improve Main St. from Cottage St. to West St. by macadamizing and constructing sidewalks.

ANDOVER, ME.—It is reported that this place is to purchase a road machine.

SALEM, N. H.—T. M. Russ informs us that it has been voted to hold over the construction of the proposed macadam road from Salem to Messers until next year.

MEREDITH, N. H.—A snow roller will be purchased, according to reports.

LITTLETON, N. H.—The selectmen have been authorized to purchase a snow roller.

NEWPORT, N. H.—It has been voted to have the selectmen obtain two snow rollers about 12 ft. long.

WOLFBORO, N. H.—About $1,000 has been voted for the repair of highways.

MANCHESTER, N. H.—The board of aldermen has authorized the appropriation of $23,000 for the repairs of highways and $4,000 for paving North and South Main St.

BURLINGTON, VT.—Bids are asked by the street commissioners until March 28 for furnishing curbing, cut stone, etc. N. K. Brown, Chn. Comrs.

GLOUCESTER, MASS.—An appropriation of $1,900 has been authorized for the purchase of a new stone crusher.

DEDHAM, MASS.—An issue of $100,000 in bonds for street improvements has been sanctioned, according to reports.

LEICESTER, MASS.—Pleasant St. will be macadamized and $4,000 expended on highways, according to reports.

LEE, MASS.—A petition will be presented to the selectmen asking for an appropriation of about $10,000 for constructing a road from West Park St. to West Center St.

WORCESTER, MASS.—Bids are asked until April 1 for 12,000 sq. yds. of block paving, 30,000 lin. ft. of curbing and 1,000 lin. ft. of flagging. W. S. Prior, St. Comr.

ORANGE, CONN.—Bids are asked by the selectmen until April 2 for constructing a macadam road 3,000 ft. long on Savin Ave.

MIDDLETOWN, CONN.—William Mylchreest, Chn. Com., writes us that this city has bought a 12-ton road roller from the Buffalo Pitts Co., Buffalo, N. Y., for $3,250. All contracts are done by day work. G. F. Peckham, Councilman.

CORTLAND, N. Y.—A committee, consisting of David F. Wallace, J. B. Kellogg, Enos E. Mellon, Chas. H. Price and B. L. Webb, has been appointed to circulate a petition for the proposed paving in Main St.

GLOVERSVILLE, N. Y.—The street committee has reported an estimate of $46,843 for brick paving to be done in portions of six streets.

HEMPSTEAD (L. I.), N. Y.—Resolutions have been prepared by City Clerk Curley for improving three highways with gravel; estimated cost, $22,000.

MOUNT VERNON, N. Y.—Bids are asked until April 5 for grading Depot Place. Wm. N. Hoyt, Cy. Clk.

NYACK, N. Y.—John D. Christie, County Engr., has submitted an estimate of $17,300 for the construction of county roads. No action has yet been taken.

NORTH PELHAM, N. Y.—It has been voted to issue $39,000 in street improvement bonds.

ROCHESTER, N. Y.—Alderman Seyle has introduced a bill in the council for paving Glenwood Ave. with asphalt, estimated cost $40,000.

SYRACUSE, N. Y.—A petition is before the council for asphalt paving in Shonnard St. from South West to Oswego St.

TUCKAHOE, N. Y.—Bids are asked until March 31 for grading, paving, etc., about 3,000 ft. of the Ponfield Road, Eastchester, as stated in our advertising columns. Engrs., Byrne & Darling, White Plains, N. Y.; Wm. J. Fisher, Town Clk., Eastchester, Tuckahoe.

WATERTOWN, N. Y.—C. O. McComb, Cy. Engr., informs us that a contract has been awarded to the Warren-Scharf Asphalt Paving Co., New York, for 800 sq. yds. of asphalt paving at $2,200.

EATONTON, N. J.—Bids are asked by the town committee until April 2 for constructing 3½ miles of macadam road, as stated in our advertising columns. W. H. De Nyse, Engr., 96 Branchport Ave., Long Branch.

MAY'S LANDING, N. J.—A contract was awarded to Quinlan & Leary, South Amboy, on March 10, for constructing a stone road from May's Landing to Egg Harbor City, at $10,000.

PATERSON, N. J.—Bids are asked until April 4 for grading and macadamizing portions of Lafayette, Ramapo and Fifth Aves. Jacob J. Van Noordt, Dir. Bd. Freeholders.

NORRISTOWN, PA.—A petition has been referred to the highway committee for macadamizing in four streets.

NORRISTOWN, PA.—Bids are asked until March 24 by the highway committee for furnishing curbstone, brick, crushed stone, cement, etc. John C. Metzger, Chn. Com.; M. D. Patterson, Cy. Engr.

EASTON, PA.—Reports state that the plans prepared by J. M. Young, Engr., for improving the Delaware River Road from this city to Martin's Creek, a distance of six miles, estimated cost $12,000, will be submitted at the next meeting of the grand jury.

BALTIMORE, MD.—Senator Randall has introduced a bill for the construction of a road about 25 miles long from this city to Annapolis. An ordinance has been referred to the highway committe for grading and macadamizing in portions of 13 streets; also for an appropriation of $21,000 for stone paving in Bush St.

ROANOKE, VA.—J. H. Wingate, Cy. Engr., informs us that the city has purchased a stone crusher from the Good Roads Machinery Co., Kennett Square, Pa., at a cost of $1,425, and will make extensive repairs to its macadamized roads.

EDGEWOOD, GA.—A new road will be built of chert from this town to Lithonia.

ATLANTA, GA.—The council has recommended improving Edgewood Ave. at a cost of $2,000.

AUGUSTA, GA.—Ordinances have been passed for repairing the sidewalks in portions of seven streets with brick and laying stone curb. J. S. Patterson, Clk. Council.

ATHENS, O.—Bids are asked until April 15 for grading, excavating, etc., portions of 24 highways. W. F. Scott, County Engr.

BRIDGEPORT, O.—The question of issuing $60,000 in paving bonds will be voted upon at the spring election.

CAMBRIDGE, O.—A resolution has been passed by the council authorizing the improvement of Wheeling St. by about 21,483 sq. yds. of brick and block paving and 7,800 lin. ft. of curbing, estimated cost $45,218. J. N. Whissell, Pres. Council; O. M. Hoge, Cy. Engr.

COLUMBUS, O.—Bids are asked until March 29 for grading portions of Toronto, Park, and Gay Sts., and paving in Miami Ave.

CINCINNATI, O.—Bids are asked until March 31 for paving Harold Alley with asphalt from Laurel St. to Betts St. Zeltner St. will be paved with brick from Corry St. to Charlton St. A. P. Butterfield, Clk. Bd. Adminstration.

CLEVELAND, O.—Bids are asked by the board of park commissioners until March 30 for macadamizing the roads and walks in Rockefeller Park, between Wade Park Ave. and Doan St.

LYMA, O.—C. E. Lynch, Cy. Clk., informs us that L. F. Prevost, Cy. Engr., is preparing plans for paving West North St. with brick from Main St. to Charles St., a distance of a mile.

MALTA, O.—This town is trying to secure authority to issue $10,000 in street improvement bonds.

WAPAKONETA, O.—Bids are asked until April 14 for grading, graveling and constructing masonry and culverts on the Gossard and Hiett Pikes. Samuel Craig, Engr.

BRAZIL, IND.—Bids are asked until March 31 for grading, graveling, etc., 21 miles of road in Van Buren township. Thos. Phillips, County Auditor.

INDIANAPOLIS, IND.—Bids are asked by the board of public works until March 28 for paving, etc., portions of Pratt St., Southeastern Ave. and 10th St. with wooden blocks and in five streets with asphalt.

HAGERSTOWN, IND.—Bids will soon be asked by the council for constructing two miles of cement sidewalks and 17,000 sq. yds. of paving. W. J. Plummer, Town Clk.

ANN ARBOR, MICH.—Bids are asked until April 13 for asphalt and brick paving, etc., as stated in our advertising columns. (Postponement from March 30.) G. F. Key, Cy. Engr.; G. V. Mills, Cy. Clk.

DETROIT, MICH.—The council is considering a resolution to pave Crane Ave. from Jefferson to Mack Ave.

DETROIT, MICH.—The proposed paving that has been recommended amounts to about $400,000.

FLINT, MICH.—Bids are asked until April 14 for 1,377 sq. yds. of brick paving, 1,377 sq. yds. of concrete and 413 cu. yds. of excavation in Beach St. Fred P. Baker, Cy. Clk.

MUSKEGON, MICH.—An election will be held April 4 to vote on the question of issuing $25,000 in highway bonds.

SAGINAW, MICH.—The following bids were received March 18 for paving Hamilton St. with asphalt: 10,460 sq. yds., Barber Asphalt Paving Co., New York, $15,364; Alcatraz Co., San Francisco, $16,755; Columbia Construction Co., Syracuse, N. Y., $16,755. Germania Ave. with brick, 610 sq. yds., John C. Shultz, $1,148; Scanlan & Crowley, $1,149; John C. Davies, $1,155; J. J. Granville, $1,295.

MILWAUKEE, WIS.—The board of public works has recommended a portion of Grand Ave. to be paved with brick and asphalt.

ST. PAUL, MINN.—Bids are asked by the board of public works until March 31 for paving two streets with asphalt, brick paving in Sherburne Ave. and grading Frank St.; estimated cost, $80,000. C. H. Bronson, Clk. Bd. Pub. Wks.

COUNCIL BLUFFS, IA.—Thos. Tostevin, Cy. Engr., informs us that two streets will probably be paved with asphalt or brick this spring.

OMAHA, NEB.—Bids are asked until March 25 for grading in five streets. Andrew Rosewater, Chn. Bd. Pub. Wks.

KANSAS CITY, MO.—Bids are asked until April 2 for grading Prospect Ave. to Dodson; surety, $200. Thos. F. Callahan, County Surv.

TACOMA, WASH.—Frank L. Davis, Cy. Engr., informs us that a contract has been let for 2,140 sq. yds. of brick paving, etc., at $5,384.

TORONTO, ONT.—Bids are asked until March 30 for furnishing paving brick for the year ending Dec. 31. John Shaw, Mayor and Chn. Bd. of Control.

HONOLULU, HAWAII.—Reports state that the public improvement committee has submitted the following estimates to be appropriated for street work: $10,900 for the opening of new streets, $22,500 for street widening, $5,000 for a new steam rollor, and $224,000 for improving about eight roads. W. E. Rowell, Supt. Pub. Wks.

MANUFACTURING PLANTS.

RIVERSIDE, MASS.—Plans have been completed, according to reports, for a 3-story factory building to be erected at Riverside by the Smith & White Mfg. Co. and the National Blank Book Co. Arch., S. M. Green, of Holyoke, Mass.

WATERBURY, CONN.—The plant of the Trott Bakery Co. was destroyed by fire, March 9, causing a reported loss of $45,000; insurance, $23,000. The building was a 4-story brick structure.

COHOES, N. Y.—The Victor Mills, of Cohoes, said to be the largest woolen mills in the United States, were destroyed by fire, March 15, causing a reported loss of $500,000.

SCHENECTADY, N. Y.—Bids are being received, according to reports, for erecting a new iron foundry, 503 × 160 ft., with an annex 120 × 104, for the General Electric Co., estimated to cost $15,000. Mgr., G. E. Emmons; Engr., W. A. Pearson.

GROVE CITY, PA.—George M. Richards, Mgr. Automatic Friction Clutch Co., of Grove City, informs us that this company's plant is now being remodeled. A gas engine will be used, with natural gas to furnish both power and illumination. The plant will be for the manufacture of an automatic gas engine clutch.

PHILADELPHIA, PA.—A fire in this city, March 9, damaged the fur felt factory of the H. W. Johns Mfg. Co., at 24th and Hamilton Sts. Reported loss, $30,000; fully insured.

PITTSBURG, PA.—We are informed that Lathbury, Spackman & Bache, 1619 Filbert St., Philadelphia, Pa., have been retained as engineers by the Clinton Cement Co., of Pittsburg, to enlarge and reconstruct its cement plant in this city. A fireproof mill building will be erected and two rotary kilns, together with the latest improved milling machinery, will be introduced, and the plant when completed will have a capacity of 300 bbls. of Portland cement a day.

READING, PA.—William Swindell & Bros., of Pittsburg, Pa., are said to have received the contract for erecting the proposed crucible steel plant of the Carpenter Steel Co. at Reading.

WILLIAMSPORT, PA.—E. Keeler & Co., of this place, manufacturers of boiler stacks and standpipes, inform us that Gotlieb Waltz, of Williamsport, has been awarded the contract for erecting a new brick addition, 80 × 150 ft., to the company's plant on West Third St.

BALTIMORE, MD.—A fire in this city, March 12, destroyed the plant of Keen & Hagerty, manufacturers of tin and japan ware, causing a reported loss of $150,000; fully insured.

ATLANTA, GA.—The Atlanta Wooden Ware Co. informs us that a new building is being erected for its use by the M. C. Kiser Co.

BARNESVILLE, GA.—J. C. Collier, of Barnesville, informs us that W. M. Howard, of this place, is constructing a 1-story brick mill, 50 × 150 ft., for the Oxford Knitting Mills; estimated cost, $4,000.

MOBILE, ALA.—Stewart & Butt, of Mobile, inform us that a new mill is now under construction for them for the manufacure of cypress shingles. All the necessary machinery has been bought. H. C. Fonde & Bro., architects and builders, Mobile.

TUSCALOOSA, ALA.—F. G. Blair, Mgr. Western Elevator Co., Tuscaloosa, writes us that this company will soon erect a new corrugated iron elevator, 40 × 70 ft., and a warehouse, 40 × 60 ft., with iron roofs, and a brick power house, 30 × 30 ft. No contracts have yet been awarded.

LEBANON, KY.—The Lebanon steam laundry building, the grocery store of J. & W. Edmonds, and other buildings, were burned March 12; reported loss, $50,000.

HAMMOND, IND.—We are informed that Garthwait & McCall, 315 Chamber of Commerce Bldg., Chicago, has been awarded the contract for erecting three new buildings at Hammond for the W. B. Conkey Co., of Chicago, printers. The main building will be of brick and stone, 400 × 320 ft., and will be heated by the blast system and contain an electric light and power plant. Arch., Geo. C. Nimmons, 94 La Salle St., Chicago.

BELOIT, WIS.—It is reported that Fairbanks, Morse & Co., will immediately erect an addition to its plant at Beloit, giving employment thereby to 200 more hands.

KAUKAUNA, WIS.—Reports state that a 2-story stone addition will be erected to the Thilmany Pulp & Paper Mills. Arch., C. B. Pride, Appleton, Wis.

ST. CLOUD, MINN.—The Goetz & Branda Co., of Chicago, Ill., is said to have received the contract for the machinery and millwright work on the new brewery for Preiss & Wimmer. The structural iron will be furnished by Dyer & Rosenberger.

DEADWOOD, S. DAK.—Press reports state that a fire in this city, March 10, destroyed the smelter of the Deadwood & Delaware Co., causing a loss of about $230,000; insurance, $100,000. Four hundred men are thrown out of employment. General Manager Carpenter thinks the works will be rebuilt.

KANSAS CITY, MO.—The Lewis Foundry & Machine Co., of Pittsburg, Pa., has been awarded the contract to erect the new plant for the McKenna Steel Works, according to reports. Estimated cost, $135,000.

HENEME, CAL.—The Oxnard Construction Co., 32 Nassau St., New York, informs us that the sugar factory which it is erecting at Heneme is all contracted for.

VALLEYFIELD, QUE.—Louis Simpson, of Montreal, informs us that most of the contracts have already been placed for the new 5-story factory building, 145 × 145 ft., to be erected at Valleyfield for the Montreal Cotton Co. The generators and motors will be supplied by the General Electric Co., Schenectady, N. Y.; the shafting by the Hunter Mfg. Co., North Adams, Mass.; and the turbines by the S. Morgan Smith Co., York, Pa.

MEXICO, MEX.—Information has been received in New York that Ernesto Chavero and Gregorio Gonzales, of Mexico City, have applied to the government for a concession to establish a plant for manufacturing telegraph and telephone wire and wire cable for the use of mines. They will invest $250,000 in the business, according to reports.

GAS PLANTS.

BOSTON, MASS.—Frederic Tudor, Jr., Treas. New England Gas & Coke Co., has awarded the Bay State Brick Co., Boston, a contract for 5,000,000 brick, to be used for the construction of coke oven foundations at the Everett works. Bids are also in for iron, to be used in the construction of an ammonia house.

HARTFORD, CONN.—The Hartford City Gas Light Co. has awarded a contract to the Berlin Iron Bridge Co., East Berlin, Conn., for constructing steel roofs with anti-condensation fireproof roof lining. The new building is of brick, about 35 ft. wide and 70 ft. long.

BOLIVAR, N. Y.—A. J. Wilber has been granted a franchise to supply this town with gas, according to reports.

BUFFALO, N. Y.—The People's Gaslight & Coke Co., Buffalo, will build a plant at Black Rock, costing $70,000. Plans prepared by Riter-Conley Co., Pittsburg, Pa., will include a steel frame office, repair shop, boiler house, engine room, generator and purifier.

LYONS, N. Y.—It is reported that the Lyons Gas Light Co.'s plant was destroyed by an explosion March 14, causing a loss of $5,000.

NEW YORK, N. Y.—Bids are asked by the department of charities, 66 Third Ave., until March 28, for installing a gas apparatus at the gas house on Randall's Island.

NYACK, N. Y.—This place voted March 15 to appropriate about $4,800 for lighting the streets.

PHILADELPHIA, PA.—Reports state that Geo. F. Payne & Co. began work March 10 on the construction of a gas plant for the United Gas Improvement Co., to include a purifying house 86 × 182 ft. and a brick condenser and scrubber house 45 × 120 ft.; estimated cost, $46,000.

PHILADELPHIA, PA.—Plans are being prepared by Chas. McCaul, 10 North 11th St., for the addition to the United Gas Improvement Co. at 20th and Market Sts., to be of brick and iron, two stories high.

PITTSBURG, PA.—The Consolidated Gas Co. will vote April 20 on a proposed increase of capital stock from $300,000 to about $4,000,000.

WASHINGTON, D. C.—Bids are asked by the war department until April 12 for furnishing steel gas tubes of one cubic foot capacity, with valves, fittings, regulators, etc. A. W. Greely, Ch. Signal Officer.

MONTGOMERY, ALA.—W. F. Vandiver, of the Montgomery Light & Power Co., informs us that plans are being prepared by F. H. Hambleton, 8 South St., Baltimore, Md., for a gas plant.

MILWAUKEE, WIS.—Bids are asked until April 15 for furnishing gas and electric light fixtures for the Milwaukee public library; surety, $2,500. Wm. J. Fiebrantz, Comptroller.

MILWAUKEE, WIS.—The county commissioners are considering a proposition to install a gas plant to light the county jail.

TOPEKA, KAN.—The city gas company proposes to construct a new plant, with a capacity of 500,000 cu. ft., this year; estimated cost, $75,000. Address Chas. K. Holliday.

ST. JOSEPH, MICH.—A contract has been awarded to Geo. C. Baxter, Detroit, for constructing eight miles of mains and a pipe under the St. Joseph River, for the St. Joseph Gas Co., at $45,000. Work will be commenced April 1.

OMAHA, NEB.—A franchise has been granted to the South Omaha Gas Co., organized by Messrs. Flynn, Wyman and Cressey, to construct a plant and mains for lighting this city.

ESCONDIDO, CAL.—J. A. Jones has been granted a franchise, according to reports, to construct and operate a gas plant in this place; population, about 1,100.

NEW COMPANIES.—Maryland Gas Co., Baltimore, Md.; $2,500,000; to construct a gas plant, mains, etc.; James Bond, William Ferguson, Frank A. Furst, Lennox Birckhead, Barnes Compton.

Indiana Heat, Light & Power Co., Mishawaka, Ind.; $250,000. It will erect a gas plant between Mishawaka and South Bend and will lay mains into both places. H. H. Hosford.

Commercial Lighting Co., New York; $10,000; to furnish oil and to manufacture lamps, fixtures, appliances, etc.; Edmund Seymour, Wm. W. Seymour, James G. Dudley, Harry G. Strong, New York; Geo. W. Titcomb, Brooklyn.

Navarro Oil Co., Bayonne, N. J.; $10,000, with $1,900 paid in; to manufacture petroleum, oil, gas, etc.; Wm. L. Wallace, Elizabeth; J. J. Viele, Bronxville, N. Y.; Chas. P. Peirce, B. F. Warren, New York.

Scranton Natural Gas & Oil Co., Scranton, Pa.; $1,000,000, with $8,000 paid in; to operate oil and gas; Wm. L. Connell, A. J. Connell, H. A. Connell, T. J. Foster, Alfred Harvey, Scranton.

Improved Acetylene Gas Co., New York; $1,000, with privilege of increasing to $2,000,000; Thomas L. Scovill, William J. Morrison, Joseph H. Senner, Anthony F. Sieghardt, Franz Neumiller.

Straight Run Oil Co., Weston, W. Va.; $50,000, with $25 paid in; to drill for oil, gas, etc.; Andrew Edmiston, J. H. Edmonds, J. W. Ross, Jacob Koblegard, Louis McBride, Weston.

National Acetylene Gas Co., Cleveland, O.; $300,000, with $50 paid in; to manufacture National Acetylene Gas machines, bicycles, lamps, etc.; J. E. Lytle, K. Hirsch, Chas. F. Lytle, A. F. Indersoll, Cleveland.

Michigan & Ohio Oil & Gas Co., Charleston, W. Va.; $100,000, with $2,410 paid in; to deal in and develop oil and gas lands; W. N. Coons, Findlay, O.; W. F. Bixby, Wm. H. Forbes, M. O. Sebring, H. H. Quigley, Kalamazoo, Mich.

Yukon Gaslight & Fuel Co.; $500,000, with $500 paid in; George Dawson, J. H. Lounge, J. H. Smith, H. S. Kozminsky, Herbert Choynski.

MISCELLANEOUS CONTRACTS.

FIRE ALARM SYSTEM.—Alexandria, Va.—The council is considering the question of installing a complete fire alarm system.

PARK.—Lafayette, N. J.—A park is to be constructed at the head of Lafayette St., to be 400 × 460 ft., according to reports.

PILING.—Meaford, Ont.—Bids are asked until April 4 for certain piling in Meaford Harbor. E. F. E. Roy, Secy. Dept. Pub. Wks., Ottawa, Ont.

FIRE BOAT.—Chicago, Ill.—Bids are asked until March 31 for constructing, complete, a steel fire boat; check, $500. D. J. Swenie, Fire Marshal.

TELEPHONE SYSTEM.—Nashville, Ind.—A franchise has been granted to S. W. Daugherty & Co. to construct a telephone line from Nashville to Columbus.

TELEPHONE SYSTEM.—Dunkirk, N. Y.—The Dunkirk & Fredonia Telephone Co. has asked for a franchise. S. Fred Nixon, Westfield, N. Y., may be addressed.

DAM AND CULVERT.—Pikesville, Md.—Bids are asked for constructing a masonry dam and arch culvert at the Druid Ridge cemetery. Frank S. Ely, Comptroller, Baltimore.

BOILERS.—St. Louis, Mo.—Bids are asked until April 2 for furnishing new boilers for the steamer "Mississippi." Capt. H. E. Waterman, U. S. Engrs., 2732 Pine St., St. Louis.

DREDGING.—Anchor Bay, Mich.—Reports state that the Rapid St. Ry. Co. will soon let a contract for about 800,000 cu. yds. of dredging. Chas. M. Swift, Secy., Detroit.

PARK WORK.—Holland, Mich.—Wm. Van Eyck, Cy. Clk., informs us that an election will be held April 4 to vote on the question of issuing $4,000 in bonds for park purposes.

TELEPHONE SYSTEM.—Canton, O.—Our correspondent informs us that the Carroll County Telephone Co. has been granted a franchise to erect poles and establish a telephone system in this city.

STEAM BOAT.—Portland, Me.—Bids are asked until April 15 for constructing a steam boat, as stated in our advertising columns. Maj. R. L. Hoxie, U. S. Engr., 537 Congress St., Portland.

REMOVING BARGE.—Allegheny River, Pa.—Bids are asked by the controller, Pittsburg, until March 25, for removing a sunken coal barge from the Allegheny River, at the foot of 3d St.

NAVAL SUPPLIES.—Washington, D. C.—Bids are asked by the war department until March 29 for furnishing gun carriages and about 1,590 projectiles. Edwin Stewart, Paymaster-Gen.

GRADING, LAYING WALKS, ETC.—Albany, N. Y.—Bids are asked until April 12 for grading in Capitol Park, laying walks, etc., as stated in our advertising columns. Geo. W. Aldridge, Supt. Dept. Pub. Wks.

MEMORIAL PARK. — Murfreesboro, Tenn.—Reports state that a memorial park is to be laid out on the old battlefield of Stone's River, near this place. J. B. Gordon, Gen. Commanding, New Orleans, La.

TELEPHONE EXTENSION.—Chambersburg, Pa.—Reports state that the Pennsylvania Telephone Co. will extend its system in the vicinity of Chambersburg, connecting with Greencastle, Mercersburg, and Welsh Run.

CITY SUPPLIES.—Pittsburg, Pa.—Bids are asked by the controller until March 31 for furnishing brick, stone, cement, sewer-pipe castings, gravel, hardware, oils, etc. Edward M. Bigelow, Dir. Bd. Pub. Wks.

CREMATORIUM.—Portland, Ore.—Steps are being taken for the construction of a crematorium; estimated cost, $100,000. Dr. K. A. J. McKenzie, Emmet B. Williams and Professor D. W. Jarvis may be addressed.

TELEPHONE EXCHANGE.—Omaha, Neb.—The Mississippi Valley Telephone Co. has applied to the council and will probably be granted a franchise to operate a telephone exchange and plant, for five years, in this city.

NAVAL SUPPLIES.—Norfolk, Va.—Bids are asked by the navy department until April 5 for furnishing electric lamps and material, lead, iron, steel, copper, brass, cement, etc. Edwin Stewart, Paymaster Gen., Washington, D. C.

STEEL PLATING.—St. Louis, Mo.—It is reported that the bid submitted by the Cincinnati Marine Railway Co., at $19,872, for steel plating the hull of the U. S. snagboat "J. N. Macomb" will be rejected. Maj. Thos. H. Handbury, U. S. Engr., St. Louis.

HARBOR WORK.—Cape Town, Cape of Good Hope.—It is reported that Coode, Son & Mathews, Consult. Engrs., 9 Victoria St., London, S. W., have submitted reports to the harbor board for extensive harbor work, estimated to cost about $20,000,000.

CEMETERY.—Buffalo, N. Y.—Reidpath & McCreary have plans for a cemetery for the Ridge Lawn Cemetery Co. About 28 acres will be graded and one mile of macadam roadway and iron fences built. E. Werick, Erie County Bank Bldg., may be addressed.

BREAKWATER.—San Pedro, Cal.—It is reported that the contract will probably be awarded to Heldmaier & Neu, Chicago, at about $1,250,000, for constructing the breakwater at this place, requiring about 2,300,000 tons of stone. The contract prices were given in our issue of Feb. 24.

DRY DOCKS.—Washington, D. C.—Reports state that the naval committee has decided to construct five dry docks, one at Portsmouth, N. H.; Boston, Mass.; League Island, near Philadelphia; Algiers, near New Orleans and San Francisco; estimated cost, about $11,500,000.

HARBOR WORK.—Waukegan, Ill.—It is reported that this city has voted to spend $4,000 for dredging the harbor channel to a depth of 16 ft. Two wholesale coal companies will build a slip 16 ft. deep and 1,000 ft. long at a cost of $35,000, and coal-storage and hoisting plants to cost $60,000.

PARK SUPPLIES.—Brooklyn, N. Y.—Bids are asked by the park department, Arsenal Bldg., 64th St., Fifth Ave., Manhattan Borough, until March 31, for furnishing hardware, plumbers' supplies, etc., and about 21,250 asphalt tiles, 10,000 bricks and 100 bbls. of Portland cement.

NAVAL SUPPLIES.—New York, N. Y.—Bids are asked by the navy department, Washington, until April 5, for furnishing the New York Navy Yard with 30 boat chains, 48 grapnels, 26 buoys, 1,050 lbs. copper nails, 39,000 lbs. steel bars, 30,000 lbs. bar steel, 13,000 lbs. steel billets, 11 593 lbs. sheet copper, etc.

HARBOR WORK.—Mexico, Mex.—Press reports state as follows: A new contract has been made between Sir Weetman Pearson and the Mexican government for the improvement of the harbors of Coatzacoalcos and Salina Cruz and the leasing of the Tehuantepec R. R. between those harbors. Contract will go into effect in six months. Gen. F. Z. Mena, Ch. Dept. Pub. Wks., Mexico.

CONTRACT PRICES.

CLEANING CANAL.—New Orleans, La.—The following bids were received by the board of drainage commissioners recently for cleaning Galsez, Broad, Poydras and Lapeyrouse canals (about 53,000 cu. yds.), all excavation to be dumped on banks of canals and there disinfected with chlorinated lime by methods to be approved by the board of health: Galvez Canal—29,000 cu. yds., J. J. Keegan, 21 7-10 cts. a cu. yd.; R. J. McNamara, 27¾ cts.; W. Demoruelle, 40 cts.; Dilworth Scudder Co., 37½ cts. Broad St. Canal—15,000 cu. yds.; J. J. Keegan, 21 7-10 cts.; R. J. McNamara, 23¾ cts.; Dilworth Scudder Co., 37½ cts. Poydras Canal—5,000 cu. yds.; J. J. Keegan, 21 7-10 cts.; R. J. McNamara, 23¾ cts.; E. A. Grasser, 37 cts.; Dilworth Scudder Co., 37½ cts. Lapeyrouse Canal—4,500 cu. yds.; J. J. Keegan, 21 7-10 cts.; George W. Forrest, 22 7-8 cts.; F. D. More, 22 cts. The total amount of the Keegan bids on all canals was $11,610. Cost for disinfecting (about 10 lbs. a cu. yd.), $16,000.

BRIDGE RAILINGS.—Philadelphia, Pa.—The following bids were received by the department of public works, March 3, for furnishing bridge railings for contract No. 46, of the Pennsylvania Ave. subway and tunnel; contract awarded The North Penn Iron Co., of North Penn Junction, all other local bidders:

Bidder.	Bridge rail'g,[1] 1,352 lin. ft.	Newels,[2] 84, each.	Name plates,[3] 14, each.	Total.	Time, days.
Geo. B. Clapp	$3.34	$8.45	$33.50	$5,694	120
William Purling & Co..	4.96	9.00	20.00	7,742	120
The No. Penn Iron Co.	2.73	7.80	19.50	4,619	90
E. D. Smith & Co.....	3.65	9.30	38.00	6,248	30
Belmont Iron Works..	3.22	6.75	29.50	5,333	110

[1] Furnishing, erecting and painting, complete. [2] Furnishing, erecting and painting newels for bridge railing. [3] Furnishing and erecting bronze name plates.

PIPE SEWERS.—Albany, N. Y.—The following bids were received by the board, March 21, for laying a pipe sewer in Monroe and Chapel Sts.; John Doyle awarded contract:

Quantities.		John Doyle.	P. H. Reilly.	M. F. Dollard.
12-in. vitrified pipe...	698 ft.....	$0.70	$0.78	$0.79
6-in. " " ...	50 "	.25	.50	.13
12-in. Y branches ...	27 each...	1.85	2.20	2.15
12-in. ⅛ bends	1........	1.00	1.50	1:30
Manholes	2 each...	34.00	35.00	37.50
Lampholes	2 " ...	12.50	14.00	12.50
6-in. bends	25 " ...	.30	.30	.30
6x8 or 6x10-in. reducrs	25 " ...	.75	1.00	.80
Total		$671.30	$760.84	$744.77

BRICK PAVING.—Newport, Ky.—The following bids were received, March 16, for brick paving in Third St., from York to Monmouth St., as advertised in Engineering News; contract awarded M. T. Flynn; the street is 40 ft. wide, 400 ft. long; the cost will be lowest ever yet contracted for this city—about $7 a foot entire width for Athen's block on 6 ins. concrete with 5-in. flat rock curbing; W. L. Glazier, Cy. Engr.:

Bids Received at Newport, Ky., March 16, for Brick Paving.

Quantities.		Thos. C. Brown, Newport,Ky.	John McLane, Newport,Ky.	Jos. Collopy, Newport,Ky.	Van Sandt & Meeds, Cincinnati,O.	John Trapp, Dayton, Ky.	J. W. Sullivan, Cincinnati,O.	L. C. Eermest, Newport,Ky.	J. M. Quill, Cincinnati,O.	M. T. Flynn, Cincinnati,O.
5-in. curb	825 ft.....	$0.56	$0.60	$0.54	$0.01	$0.42	$0.58	$0.58	$0.55	$0.75
5-in. curb, curved	40 "	.78	.75	.75	.85	.60	.80	.58	.01	1.50
Resetting curb	30 "	.15	.01	.25	.10	.10	.20	.01	.01	.10
Brick paving	1,800 sq. yds.	1.00	1.02	.95	1.10	.79	.96	.96	.97	.50
6-in. concrete foundation...	1,800 " "	.50	.52	.50	.60	.50	.50	.52	.48	.55
Old limestone paving.......	10 " "	.25	.01	.20	.25	.50	.01	.01	.01	.50
3-in. drain tile	100 lin. ft..	.005	.01	.00½	.01	.02	.03	.05	.03	.03
Excavation	1,000 cu. yds.	.06	.01	.14	.00½	.18	.24	.25	.01	.25
Remodeling catchbasin	1........	15.00	8.00	10.00	20.00	20.00	5.00	10.00	8.00	.50
Sidewalk paving	10 sq. yds.	.30	.01	.15	.25	.50	.10	.50	.50	...
Total		$3,279	$3,317	$3,247	$3,136	$2,908	$3,394	$3,436	$3,091	$2,830

BRICK PAVING.—Albany, N. Y.—Our correspondent informs us that the following bids were received March 21, by the board of contract and apportionment for brick paving in Munroe St., and the contract awarded T. Henry Dumary, who will use Catskill brick:

Quantities.		Mulderry Bros.	P. H. Reilly.	Edw. F. Dillon.	T.H. Dumary.
Brick pavement	1,970 sq. yds.	$1.72	$1.73	$1.75	$1.70
Curb:					
New, 6-in. straight	1,700 lin. ft..	.40	.50	.40	.25
6-in., circular ...	60 " "	.40	.50	.40	.20
Relaid on sand....	10 " "	.25	.50	.15	.20
On concrete	40 " "	.30	.70	.20	.20
Relaying on sand ..	10 sq. yds.	.40	.50	.15	.50
Relaying on concrete	5 " "	1.30	1.00	1.25	1.00
Sidewalk:					
New, vitrified brk.	3,100 sq. ft...	.08	.09	.08	.09
4-ft. flag	2,370 " "	.14	.13	.13	.14
Relaying	5,000 " "	.03	.04	.01	.03
Recvg basins, complt	2 each...	70.00	57.00	65.00	60.00
Days to complete at $5.00.......		15	20	12	10
Total		$5,062	$5,332	$4,965	$4,737

WATER PIPE.—St. Louis, Mo.—The following bids were received, March 15, for furnishing 3,200 tons of 6 to 36-in. coated cast-iron water pipe; it to be delivered in the city yard; contract awarded Chattanooga Foundry & Pipe Works, whose bid was the lowest ever submitted in this city for water pipe; E. S. Foster, Secy.:

	A ton.	Total.
Howard-Harrison Iron Works, Bessemer, Ala.	$15.74	$50,368
Dennis Long & Co., Louisville, Ky.........	14.97	47,904
Chattanooga (Tenn.) Foundry & Pipe Works	14.70	47,040
Addyston Pipe & Steel Co., Cincinnati, O....	15.37	49,184

EXCAVATING, HAULING AND LAYING.—St. Louis, Mo.—The following bids were received by the board of public improvements, March 15, for excavating, hauling and laying water pipe; John F. McMahon & Co. awarded the contract at a total of $17,323; all local bidders:

Bids Received at St. Louis, Mo., March 15, for Excavating, Hauling and Laying Water Pipe.

Bidder.	Pipe.						Old pipe, taking up			Setting fire plugs, 175 each.	W. I. strps & bands, 4,000 lbs.	Girder cr'ssing, 1.	Laying 8-in. water pipe.
	30-in., 30 ft.	20-in., 11,600 ft.	12-in., 12,000 ft.	15-in., 150 ft.	10-in., 50 ft.	6-in., 800 ft.	6-in., 10,250 ft.	8-in., 7,000 ft.	10-in., 1,300 ft.				
R. J. MacDonald & Co...........	$1.00	$1.00	$0.30	$0.50	$0.30	$0.25	.....	.....	.....	.....	.....	....	$0.25
John F. McMahon & Co.	.90	.69	.47	.50	.36	.31	$0.01	$0.01	$0.01	$10.00	$10.00	$250	.34
J. Black Masonry & Con. Co.....	1.50	1.40	.97	1.10	1.08	.60	.20	.20	.20	12.00	.04	300	.75
John O'Donald	2.00	1.00	.50	.75	.50	.35	.05	.08	.10	18.00	.04	475	.35
J. W. Thompson	2.00	.97	.50	.75	.50	.25	.03	.05	.05	12.00	.05	425	.50
Meyers Construction Co.	2.00	1.20	.44	.60	.35	.30	.03	.05	.10	2.00	.04	250	.32

GRADING, ETC.—Buffalo, N. Y.—The following bids were received, March 14, for grading roadways, sidewalks, and opening gutters in unpaved streets for one year, and the contract awarded John Johnson; all are local bidders; R. G. Parsons, Secy. Bd. Pub. Wks.:

Bidder.	John. Johnson.	John Mumm.	John Hannaman.	Buffalo Marble Pvg Co.	Ed. Sell.
Cut, a cu. yd.	$0.15	$0.20	$0.22	$0.21	$0.30
Filling, a cu. yd.	.35	.25	.25	.26	.35
Roundg rdwys, a lin.ft	.03	.035	.0375	.04	.045
2-ft. pine sluices......	.20	.12	.12	.10	.20
3-ft. pine sluices	.22	.15	.16	.14	.30

TRENCHING.—Richmond, Va.—The following bids were received, March 16, for cutting trenches and refilling with clay, macadam, gravel, etc.; Chas. E. Bolling, Supt.: W. H. Fletcher, 25½ cts., 26½ cts., 26½ cts.; F. W. Torrence & Co. (accepted), 21 cts., 22 cts., 22 cts.; E. R. Goodwin, 23 cts., 24¾ cts., 24¾ cts.; and A. W. Maynard, 22 cts., 23½ cts., and 23½ cts.

SUBMERGED WATER PIPE.—Portland, Ore.—We are informed that the water committee received the following bids, March 15, for furnishing and laying 2,100 ft. of 24-in. submerged steel pipe across the Willamette River; all local bidders; D. D. Clarke, Asst. Engr.:

Bids Received at Portland, Ore., March 15, for Submerged Steel Water pipe.

Bidder.	24-in. steel tubing,* 2,000 lin. ft.	Flexible joints cast-iron, 60 each.	Dredging, 20,000 cu. yds.	Laying pipe and joints, 2,100 lin.ft.	Total.
Willamette Iron Works	$9.00	$290.00	$0.45	$3.85	$52,485
Philip Buehner	10.00	172.50	.35	4.40	46,590
The Smith & Watson Iron Works	9.91½	274.40	.55	3.20	54,014
Robert Wakefield	9.00	275.00	.35	1.50	44,650
A. R. Heintz & Co.	9.25	257.00	.41	3.00	48,420
Smyth & Howard	8.50	260.00	.40	1.77	44,317
Wolff & Zwicker Iron Works	8.25	246.80	.50	6.10	54,118

*This tubing is lap-welded with cast-iron flanged joints.

WATER PIPE.—Everett, Mass.—We are informed that the following bids were received March 15 for furnishing 6, 8, 10 and 12-in. cast-iron water pipe, as advertised in Engineering News; Jas. A. Wallace, Secy. and Clk.:

Bidder.	A ton of 2,000 lbs.
Donoldson Iron Co., Emaus, Pa. (accepted)......	$18.80
R. D. Wood & Co., Philadelphia, Pa..............	19.20
NcNeal Pipe & Foundry Co., Burlington, N. J....	*20.55
Fox & Engel, 253 Broadway, New York	20.20
Warren Foundry & Mach. Co.,160 Broadway, N. Y.	19.40
South Pittsburg (Tenn.) Pipe Works.............	21.12
Chas. Millar & Son, Utica, N. Y................	20.72
Anniston Pipe & Foundry Co., Anniston, Ala.....	20.15
Buffalo Cast-Iron Pipe Co., Buffalo, N. Y.......	21.40
Reading Foundry Co., Reading, Pa.	20.38
Davis & Farnum Mfg. Co., Waltham, Mass.......	†19.30
M. J. Drummond & Co., 192 Broadway. New York	19.29
Builders' Iron Foundry, Providence, R. I........	20.10
Addyston Pipe & Steel Co., Cincinnati, O.	21.50
Jackson & Woodin Mfg. Co., Berwick, Pa........	20.25

*For 6 and 8-in. pipe; for 10 and 12-in. pipe its bid was $20. †For 6 and 8-in. pipe; for 10 and 12-in. pipe, $19.05.

The pipe to be supplied will be as follows: 6-in., 550 lengths, 364 lbs. a length of 12 ft.; 8-in., 55 lengths, 567 lbs. a length of 12 ft.; 10-in., 677 lengths, 765 lbs. a length of 12 ft.; 12-in., 295 lengths, 985 lbs. a length of 12 ft.

COUNTY BRIDGES.—Nebraska City, Neb.—The following bids were received by the county commissioners, March 4, for constructing such bridges as may be directed during the year; H. R. Christy, County Clk.:

Bids Received at Nebraska City, Neb., March 4, for Construction of Bridges During the Ensuing Year.

Bidder.	Flat bridges, 14 to 20 ft.	Pile bridges, 20 to 100 ft.	Combination bridges.				All approaches.
			28 to 36 ft.	40 to 50 ft.	50 to 64 ft.	80 to 85 ft.	
M. L. Scott, Wahoo, Neb.	$1.95	$2.20	$3.50	$4.50	$5.75	$6.25	$1.95
Canton Bridge Co., Canton, O.	1.40	2.40	2.80	3.20	3.40	4.20	1.40
T. J. Crommel, Auburn, Neb.	1.65	2.02	2.87	3.31	3.18	4.17	1.58
H. Sparks, St. Joseph, Mo.	2.49	2.49	3.25	3.50	3.98	4.14	2.49
J. W. Hoover, Kansas City, Mo.	1.80	2.60	4.20	4.20	4.25	4.45	....
Gawdy & Dean, Rockport, Mo.	2.22	2.70	3.20	4.15	5.00	5.89	....
J. R. Shuly & Co., Lincoln, Neb.	2.15	2.61	3.46	3.46	4.65	5.20	1.69
Henderson Bros., Savannah, Mo.	1.21	2.55	2.61	3.02	3.04	4.02	1.17
Geo. E. King Bridge Co., Des Moines, Ia.	2.00	2.84	3.25	4.28	5.00	5.95	1.40

SAND.—Buffalo, N. Y.—The following bids were received recently for furnishing sand for repairing stone pavements during the year; bid of Point Albino Sand Co. accepted; the price given is for a cu. yd; M. M. Drake, Chn. Com.:

Items.	Point Albino Sand Co.	W. E. Carroll.
Delivered at city yard, foot Church St..	$0.80	$0.85
" on cars at Amherst St........	.86	.85
" on cars at East Buffalo......	.88	.90

REPAIRING ASPHALT PAVING.—Philadelphia, Pa.—The contract for repairs to asphalt streets requiring a thousand yards or more of repairing was awarded March 7 to the Alcatraz Co., 57 East 59th St., New York, and San Francisco, Cal., at 98 cts. a yd.

DREDGING.—Fort Jefferson, Fla.—It is stated that the Alabama Dredging & Jetty Co., Mobile, Ala., has been awarded the contract for dredging in Fort Jefferson Harbor on Dry Tortugas Island at 38 cts. a cu. yd. This is the first step taken towards the construction of a coaling station on this island. Estimated cost, $1,000,000.

PAVING.—Schenectady, N. Y.—The following bids were received March 8 for paving in Albany St., with Catskill brick; L. B. Sebring, Cy. Engr.:

Bids Received at Schenectady, N. Y., March 8, for Paving.

Bidder.	Paving brick, sq. yd.	Curbing, lin. ft.	Water taps, each.	Sewer, ft.	Lead pipe, ft.	Total.
Chambers & Casey, Rochester, N. Y.	$2.20	$0.40	$6.00	$0.45	$0.30	$30,983
Edward Harrington, Schenectady, N. Y.	1.73	.39	8.00	.35	1.00	24,938
John Twomey, Schenectady, N. Y.	1.69	.41	7.00	.95	.90	24,586
Erbeck Bros., Schenectady, N. Y.	1.74	.44	10.00	.35	.50	25,346
Benjamin Van Wranken, Schenectady, N. Y.	1.59¾	.45	8.00	.45	.60	23,569

SPECIAL CASTINGS.—Richmond, Va.—The Smith-Courtney Co., Richmond, has been awarded the contract for furnishing 3,000 lbs. of special castings at $1.92 a cwt. Bids were also received for furnishing water meters, but the awarding of the contracts has been deferred to a future meeting. Chas. E. Bolling, Supt.

RETAINING WALLS, GRADING, ETC.—Philadelphia, Pa.—Our correspondent informs us that the following bids were received March 3 by the department of public works for constructing retaining walls, grading, etc., on contract No. 44 of the Pennsylvania Ave. subway; time, four months; contract awarded E. D. Smith & Co.; Geo. S. Webster, Ch. Engr.:

Quantities.		E. D. Smith & Co., 24th & Penn. Ave.	M. J. Kennedy, 211 So. 9th St.	M. McManus, 414 Wood St.
Tearing down	300 cu. yds.	$1.00	$3.00	$3.50
Excavation	6,500 " "	1.00	1.75	3.65
Rubl. masy, below line	300 " "	5.50	7.00	7.00
Above neat line....	500 " "	6.00	7.00	9.00
Rock-faced crsd ashl'r[1]	230 " "	8.50	10.00	12.00
Granite bridge-seats...	15 " "	33.00	30.00	45.00
Coping	35 " "	12.00	30.00	45.00
Concrete	5 " "	5.75	7.00	8.00
Drainage inlet basins..	2 each...	55.00	55.00	125.00
8-in. terra c'ta pipe, etc	100 lin. ft..	.60	1.00	.75
Repaving granite block	25 sq. yds.	1.40	1.00	.75
Brk mas'ry in Nat.cem.	10 cu. yds.	8.50	9.00	12.00
Iron railing, No. 6....	360 lin. ft..	1.25	1.50	1.45
Newel posts for same.	4 each...	6.00	5.50	4.35
French drains	300 lin. ft..	.30	.15	.35
Cast-iron weepers	150 " "	.30	.25	.40
Temp. wooden railing.	300 " "	.20	.10	.85
Total		$15,308	$22,710	$37,848
To be purchased by contractor:				
Bldg stone,on ground	693 cu. yds.	$2.50	$3.00	$2.00
Steel box girder	1........	35.00	10.00	125.00
Total		$1,768	$2,089	$1,511
Actual total of contract......		$13,540	$20,621	$36,337

[1] Including rubble backing.

GRADING.—Schenectady, N. Y.—The following bids were received March 8 for grading Brandywine Ave., from Union to State St; Lewis B. Sebring, Cy. Engr.:

Bidder.	Filling, cu. yd.	Total.
Edward Hannigan, Schenectady, N. Y. ...	$0.23	$,788
Beckwith & Son, Schenectady, N. Y.	.15	3,576
John Twomey, Schenectady, N. Y.	.165	3,435

DREDGING.—Oakland Harbor, Cal.—It is stated that Maj. W. H. Heuer, U. S. Engr., Flood Bldg., San Francisco, will recommend that the contract for dredging in Oakland Harbor be awarded to the San Francisco Bridge Co. at 13 cts. a cu. yd. for about 600,000 cu. yds. of dredging in the jetty channel; total, $78,000; 41 cts. a cu. yd. for dredging a space 300 × 2,000 ft. at the city-front; total, $23,500.

EXCAVATING, HAULING AND LAYING.—St. Louis, Mo.—We are informed that the following bids were received March 15 for excavating, hauling and laying water pipe, the contract for which was awarded R. J. McDonald & Co. at a total bid of $9,908; E. S. Foster, Secy. Bd. Pub. Improvements:

Bidder.	6-in. water pipe, 25,000 ft.	12-in. water pipe, 24,500 ft.	Setting complete, 130 fire plugs.	W't iron bnds and straps, 3,500 lbs.	Taking up old 6-in. pipe,5,000 ft.
R. J. McDonald & Co.......	$0.15	$0.225	$3.00	$0.03	$0.03
John B. McMahon & Co....	.17	.23	4.50	.035	.02
Patrick O'Donald	.175	.25	4.50	.04	.03
R. J. Boyd Pvg. & Con. Co.	.1725	.26	4.00	.04	.03
Freeman Wright	.15	.22	4.00	.04	.03
Timothy Maloney	.15½	.24½	6.00	.04	.02
Meyers Construction Co....	.18	.29	5.00	.04	.03

SANDSTONE PAVING BLOCKS.—Buffalo, N. Y.—P. B. McNaughton has been awarded the contract for furnishing hard Medina sandstone paving blocks, etc., as may be required during the year, to be delivered in city yard or on site of work: Hard Medina Sandstone paving blocks, a cord of 128 ft. measurement on boat in city yard, $9.54; 24-in. crosswalk, a lin. ft., 30 cts.; 18-in. crosswalk, 28 cts.; 18-in. curbing, 25 cts.; flat gutter stones, 18 cts., and platform stone, 75 cts.

MUD DREDGING.—Philadelphia, Pa.—The contract for dredging the Schuylkill River, south of Girard Ave. bridge to the Fairmount dam, has been awarded by the park commissioners to John Lynch, at 14⅝ cts. a cu. yd. The operation is an extensive one, and will be the means of removing from the bed of the river tons of mud that have accumulated during years. The mud so taken up is to be deposited along the banks between Fountain Green bridge and the landing at Strawberry and will cost about $25,000.

WATER PIPE AND LAYING.—Cincinnati, O.—Dr. A. B. Thrasher, of the City Hospital trustees, received the following bids March 7 for furnishing and laying water pipe from the city mains to the branch hospital: To furnish pipe—F. Buns Co., Cincinnati, 4-in. valves, $9.50; 6-in., $11.75; 8-in., $16.90. Queen City Brass & Iron Works, Cincinnati, valves, 4 to 6-in., $9; 3 to 4-in., $6; extension, $2.65; South Pittsburg Pipe Works, South Pittsburg, Tenn., (pipe and specials), $1,159; valves, 4-in., $9.50; 6-in., $11.75; 8-in., $16.90; Bourbon Copper & Brass Works, Cincinnati, valves, 4-in., (ordinary), $8.50; (regulation), $9.50; 6-in., $10.75 (ordinary); 6-in., (regulation), $11.75; 8-in. (ordinary) $15.90; (regulation), $16.90; hydrants, $18 each (ordinary), patent, $22 each, single nozzle, $11 each; Addyston Pipe & Steel Co., Cincinnati (pipe and specials), $1,250; valves, 4 to 6-in., $9;

3 to 4-in., $5.50; extension valve-boxes, $2.15. To lay pipe—Van Sandt & Meeds, $830, concrete $25; Thomas Elliott, $8.59, concrete $25; P. Murray & Sons (including concrete), $713; Frank Buns Co. (not including concrete), $961, and T. W. Walsh (including concrete at $40 and setting valves and valve boxes, $5 each), $633.

WATER PIPE.—Boston, Mass.—W. E. Swan, Ch. Clk. and Secy. to Water Comr., informs us that the following bids were received March 9 for furnishing 5,700 tons of cast-iron water pipe; the Warren Foundry & Machine Co.'s bids was accepted; John R. Murphy, Water Comr.:

Bidder.	Pipe, all sizes.	Specials.	Total.
Warren Fdy & Mach. Co., Phillipsburg	$16.75	$33.00	$97,100
Camden Iron Works, Philadelphia....	17.12	17.12	97,584
Nat'l Fdry & Pipe Wks.(Ltd.),Scottdale	16.90	35.00	98,140
McNeal Pipe & Fdry Co., Burlington.	16.80	36.50	97,730
Howard-Harrison Irn Co,Bessemer,Ala.	18.84*	.....	.....

*For 20, 24 and 36-in. only.

WOODEN SIDEWALKS.—Buffalo, N. Y.—The following bids were received by the board of public works, March 14, for constructing and repairing wooden sidewalks and crosswalks for a year in District No. 1; contract awarded John Mumm; all local bidders; R. G. Parsons, Secy.:

Bidder.	—Sidewalks.— Complete.	Repaired.	Crosswalks, constd.	Crosswalks, repaired.	Grading.
John Mumm	$0.15¾	$0.01	$0.16	$0.03	$0.25
C. F. Mensch	.16¼	.03	.22	.03	.20
C. Mosier	.16½	.03¼	.18½	.02	.27
Wilson & Turner...	.17	.02	.18	.02	.20
C. J. Smith	.17	.18	.20	.20	.25
A. P. Bournique ...	.17½	.03½	.24	.04	.25
Bailey & Stoner....	.17½	.04	.24	.04	.20
C. J. Sonderman ...	.17⅕	.03	.24⅕	.03	.25
M. A. Hoefler	.19¼	.04	.29	.04	.25

Wm. H. Fitzpatrick has been awarded the contract for similar work in District No. 2, at 15½ cts., 1 ct., 15½ cts., 2 cts., and 20 cts., respectively.

COFFER DAM.—St. Paul, Minn.—Capt. Abbott, U. S. Engr., Globe Bldg., received, on March 7, from George Borolin the lowest bid for the material for use in the coffer dam of Meeker Island dam, No. 2, at 15 cts. a cu. yd. for earth; 23 cts. for lime rock, 20 cts. for sandstone. McQuaid Bros. are said to have submitted the highest bid at $1.25, $1.15 and $1.80, respectively. The dam will cost about $60,000.

METER BOXES, GATE VALVES, ETC.—Richmond, Va.—The following bids were received, March 16, for furnishing water meters, gate valves, etc., all local bidders; Supt., Chas. E. Bolling:

Quantities.		Smith-Courtney Co.	J. H. McGowan Co.	[1]Southern Railway Supply Co.	[2]G. & A. Bargamin.	[3]Geo. B. Gains & Co.
Gate valves:						
3-in.	6 each...	$4.87	$4.25	$4.12	$4.00	$3.71
4-in.	10 " ...	6.09	5.50	5.50	5.50	4.90
6-in.	—.........	9.98	9.70	8.25	8.00	7.35
8-in.	—.........	14.95	14.50	13.75	13.50	12.25
Meter boxes	1,400 each...	1.23¾	1.28	1.20	1.25	...
Wiping solder	1,700 lbs.....	.0937	.09⅛	.09	.08½	.091
Brass work*.............		244	286	251	256	...

[1]Awarded contracts for meter boxes. [2]Awarded contracts for wiping solder. [3]Awarded contract for gate valves. *Was let as a whole and included: Tapping cocks—100 ½-in., 100 ¾-in. and 24 1-in; stop cocks—150 ½-in., 100 ¾-in., 24 1-in., and 12 1-in. corporation.

GRADING.—Steubenville, O.—It is stated that the contract for grading two sections of the Rush Run road at this place has been awarded to T. J. Stringer, Portland Station, O., as follows: Section 1—Earth, 34½ cts. a cu. yd.; the same for shell rock and solid; hauling, 1 ct. a cu. yd.; removing trees, 50 cts. each; 12-in. drain, 25 cts. a ft.; 18-in. drain, 40 cts. a ft.; 24-in. drain, 60 cts. Section 2—15 cts., 21 cts., 33 cts., 1 ct., $1.00, 30 cts., 40 cts. and 65 cts., respectively. Samuel Houston, County Engr.

SPECIAL CASTINGS.—Boston, Mass.—The following bids were received by Water Commissioner Murphy, March 16, for furnishing special iron castings; (1) being for 721,000 lbs. branches, curves, pipe castings, etc., and (2) for 560,000 lbs. of caps, sleeves, reducers, gates, hydrants, etc., a lb.:

	(1.)	(2.)
Osgood & Hart,Charlestown,Mass.	$0.01½	$0.01⅗
R. D. Wood & Co., Philadelphia.	.021	.02 &.02⅛
Mechanics' Iron F'dry, Roxbury	.01 & .00$^{24}/_{100}$	.01 & .00$^{41}/_{100}$
Session F'dry Co., Bristol, Conn..	.01⅛	.01½ .01⅛

WATER PIPE.—Boston, Mass.—We are informed that the following bids were received, March 16, by the distribution department of the Metropolitan Water Board for furnishing 1,200 tons of 60-in. cast-iron water pipe; the bids are for a ton of 2,000 lbs. f. o. b. Boston:

McNeal Pipe & Foundry Co., Burlington, N. J.	$18.00
Howard-Harrison Iron Co., Bessemer, Ala.	18.80
Camden Iron Works, Camden, N. J.	19.68

WATER PIPE.—Sandusky, O.—F. W. Bauer, Supt. Water-Works, informs us that the following bids were received March 17 for furnishing 4,500 ft. of 8-in. cast-iron water pipe—about 100 tons of 2,000 lbs. each—f. o. b. Sandusky:

Dennis Long & Co., Louisville, Ky.	$16.25
Michigan-Peninsular Car Co., Detroit, Mich.	16.85
The Addyston Pipe & Steel Co., Cincinnati, O.	14.75
Lake Shore Foundry, Cleveland, O.................	15.20

PROJECTILES.—Washington, D. C.—The Bureau of Ordnance of the War Department received the following bids, March 14, for furnishing projectiles: (1) 149 8-in., armor-piercing shot, capped; (2) 150 8-in. armor-piercing shell, capped; (3) 432 10-in. armor-piercing shot, capped; (4) 481 armor-piercing shell; (5) 1,241 12-in. deck-piercing shell, weighing 800 lbs. each; (6) 935 shell same as item 5, weighing 1,000 lbs. each:

Midvale Steel Co., Philadelphia, Pa., (1) $116.73; (2) $109.63; (3) $206; (4) $193.48; (5) $187.67; (6) $235.44.

Benj. Atha & Illingworth Co., Newark, N. J., (1) $105; (3) $190.

Firth Stirling Steel Co., Reading, Pa., (1) $163.17; (2) $109.63; (3) $206; (4) $193.43; (5) $187.67; (6) $235.44.

Carpenter Steel Co., Pittsburg, Pa., (1) $116.73; (2) $109.63; (3) $206; (4) $193.48; (5) $187.67; (6) $235.44.

The Midvale Steel Co. offered to begin delivery in 25 days, and the Carpenter Co. 25 a day after April 8.

CARTRIDGES.—Washington, D. C.—The war department received the following bids March 14 for furnishing (1) 10,000,000 steel metallic rifle ball reloading cartridges, black powder; (2) 2,000,000 of the same, but smokeless powder:

Union Metallic Cartridge Co., Bridgeport, Conn., (1) $18.45; (2) $27.

United States Cartridge Co., New York, (1) $18.50.

Winchester Repeating Arms Co., New Haven, Conn., (1) $18.50; (2) $27.

BRIDGES.—Beatrice, Neb.—It is reported that the Youngstown Bridge Co., Youngstown, O., has been awarded the contract for building county bridges as follows: 24-ft. iron span, $6.50 a ft.; 132-ft., $7.50; 42-ft., $8.65; 52-ft., $8.80; 55-ft., $9.25; 62-ft., $10.26; 70-ft., $10.50; tubes, 18-ft., $3.90 a ft.; 20-ft., $4.50; 24-ft., $5.50; 30-ft., $6.50; 36-ft., $7.50; 42-ft., $9.00; Channel legs (price for two on each end)—6-ft., $3.25; 7-ft., $4.25; 8-ft., $5.75; Pile Bridges, $4 a ft.; Approaches, $3.75 a ft.; Piling furnished and driven, 35 cts. a ft.; Oak lumber in place, $29.00 a 1,000 ft. J. M. Jones, Chn. Bd. County Comrs.

REPAIRING ROADWAYS, HOUSES, ETC.—Buffalo, N. Y.—The following bids were received by the board of public works, March 14, for repairing roadways, bridge-tenders' houses, bridge seats, roadways of approaches and wooden bents on which swing bridges rest when open, on South Michigan St., over Buffalo River and Blackwell Canal, and the Ohio St., over Buffalo River; also the roadways and sidewalks and other woodwork (except piling) of all bridges in the city; contract awarded John O'Day:

Items.	John O'Day.	Ph. Marburg.	W. S. M'Connell.	G.W. Moore.
White oak plank[1], etc., complete.	$29.00	$28.50	$30.00	$29.00[2]
Timber,[1] &c., in place, complete	30.00	30.00	29.50	35.00
Pine joists and planks,[1] complete	25.00	26.00	28.00	27.00[2]
Pine timbers,[1] in place.........	25.00	30.00	30.00	35.00
Hemlock tmbr or plank,[1] in place	14.00	14.00	15.00	20.00
Pine boards and battens,[1] in place	25.00	18.00	20.00	20.00
Shingles, 1 square, in place.....	3.50	3.00	3.00	5.00
Filling, complete, in plc, a cu.yd.	.60	.60	.50	.70
Painting, 2 coats, a sq. yd......	.15	.10	.10	.15
Old planks made used of[1].....	3.00	3.00	5.00	5.00
Iron bolts, etc., in place, a lb....	.04	.06	.05	.08
Planed white oak,[1] in plc, cmplte	30.00	30.00	30.00	35.00
Pine,[1] in place, complete	30.00	30.00	30.00	40.00

[1]A 1,000 ft. B. M. [2]Informal.

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INDUSTRIAL NOTES.

THE UNION CAR CO., Buffalo, N. Y., has the contract to build 1,000 box cars for the Lehigh Valley R. R., according to report.

THE NATIONAL ELASTIC NUT CO., Milwaukee, Wis., has established a Chicago branch at 508 Calumet Bldg., with Mr. W. S. Grubb and Mr. D. R. Truckenmiller as agents.

R. D. WOOD & CO., Philadelphia, are reported to have recently shipped 45 tons of heavy machinery to Glasgow, Scotland, including a steam riveter and a steam hydraulic tower crane.

THE W. A. MURTFELDT CO., Boston, Mass., has finished the large contract for an artificial stone floor, 300 × 180 ft., for the paint shop of the Boston & Albany R. R. at Alston, Mass.

THE FREDERICK POST CO., manufacturers of drawing materials, is the new name by which the former Post & Jacobi Co., Chicago, will be known hereafter. The company in its new form remains identical with the former company and assumes all of the former's liabilities and debts. Mr. Frederick Post is the President.

THE INDIANA ROAD MACHINE CO., Fort Wayne, Ind., has recently put upon the market its Indiana stone crusher, which is made in both stationary and portable forms. The company claims that by the use of a compound oscillating die having curved face the capacity is greatly increased. It is also manufacturing the Indiana reversible road grader.

THE Q. & C. CO., Chicago, has accepted the Western agency for the Pennsylvania Steel Co., Steelton, Pa., with headquarters at its general offices, Western Union Building, Chicago.——Mr. Frank W. Edmunds, for many years General Sales Agent of the Troy Steel Co., Troy, N. Y., will assume, after April 1, the active duties of Secretary of the Q. & C. Co., and be located in Chicago.

THE EDGE MOOR BRIDGE CO., Wilmington, Del., according to report, has the contract to furnish 2,000,000 lbs. of steel eye-bars required in the Brooklyn anchorage of the new East River Bridge, New York.——The company has also the contract, it is said, for furnishing and erecting the steel frame work of the 17-story building of the Real Estate Trust Co., Broad and Chestnut Sts., Philadelphia, involving about 3,500,000 lbs. of metal.

THE RAILWAY CYCLE MFG. CO., Hagerstown, Ind., has an order for seven Hartley & Teeter railway cycles, of 3½-ft. gage, for shipment to a foreign country, through its New York agents, T. N. Motley & Co. It recently furnished a cycle to the Mitchell Lime Co., Mitchell, Ind., which is being used daily on a 4% grade, and is giving complete satisfaction. Many of these cycles have been shipped to Russia, and a number of them are in use in the different provinces of South America and in other foreign countries.

THE DETROIT GRAPHITE MFG. CO., Detroit, Mich., reports that it is busy at present and that the outlook for future orders is very bright. Mr. A. A. Boutell, Mgr. and Treas., advises us that its Superior graphite paint has been specified by the U. S. government for use on all guns, gun carriages, etc., at the various arsenals in different parts of the country. The New York office of this concern is at 256 Broadway, and Messrs. Church & Getchell are the general Western agents, with headquarters in the Marquette Bldg., Chicago.

THE IMPROVED HEATH RAIL JOINT is now in use on a number of railways, and Mr. W. E. Dorwin, Gen. Mgr., 304 Tacoma Bldg., Chicago, advises our representative that negotiations are pending with other railways with every prospect of being favorably terminated in the near future. The improved Heath joint was designed by Mr. Dorwin, who has had over 35 years' experience in railway affairs, most of which has been in the track department. The guarantee given with this joint is that it will last as long as the rail, and that every joint shipped from the factory at Chicago Heights, Ill., will absolutely fit the rail.

THE SARGENT CO., Chicago, manufacturer of railway brake shoes and castings, reports that the heavy business so far this year, an increase of something like 40% over the corresponding period in 1897, has made it imperative to considerably increase its capacity, and to that end it has recently installed a 20-ton electric traveling crane from Manning, Maxwell & Moore, 111 Liberty St., New York, in addition to the cranes now operated, and an additional saw of the latest and most improved type manufactured by the Q. & C. Co., Chicago. In the power house, new engines, dynamos, etc., are about to be installed. The present capacity is about 1,000 tons a month.

THE ST. LOUIS IRON & MACHINE WORKS, St. Louis, Mo., have just completed two cross compound condensing St. Louis-Corliss engines of 200 HP. each, to be direct-connected to Westinghouse generators for the Dallas St. Ry. & Light Co., Dallas, Tex. The works has under construction one cross compound condensing heavy duty St. Louis-Corliss engine of 1,000 HP. for the Consolidated Electric Light & Power Co., Kansas City, Mo.; two cross compound condensing heavy duty St. Louis-Corliss engines of 500 HP. each, for the Lehigh Portland Cement Co., Allentown, Pa., and one St. Louis-Corliss engine of 200 HP. to be attached to an air compressor for the Anheuser-Busch Brewing Association, St. Louis, Mo., to be used for deep well pumping by air pressure.

NEW COMPANIES.—Greenbrier Construction Co., Grafton, W. Va.; $2,000,000, commencing with $500; to build and equip railways, electric plants, etc.; J. N. Beckley, E. M. Upton and T. R. Levis, of Rochester, N. Y.; C. M. Warner, Syracuse, N. Y.; J. T. McGraw, Grafton.

Fulton Telephone Co., Fulton, N. Y.; $15,000; directors, Lenox Smith and J. P. Whitaker, of New York; George C. Webb, J. C. Curtis, Francis Stiles and F. A. Sage, of Fulton.

Ward Leonard Electric Co., Bronxville, N. Y.; $100,000; to manufacture and sell switches, electrical heating devices and electrical machinery; H. Ward Leonard, Charles E. Carpenter, Richard H. Mansfield and Henry Price Ball, all of Bronxville; Henry A. Wise, New York.

Bristol Ice Mfg. Co., Fall River, Mass.; $200,000, commencing with $500; to manufacture and deal in artificial ice; Peter Hartford, A. H. Stetson, J. Boardman, Jr., S. J. Hutchinson and E. L. Tierney, all of Boston, Mass.

Campbell Underground Trolley Co., Towanda, Pa.; to manufacture and sell an underground trolley invention; Pres., N. N. Betts; Vice-Pres., E. F. Kizer; Secy., E. B. McKee.

Dirigo Ball Mfg. Co., Bangor, Me.; $200,000; to manufacture steel balls, etc.; Pres., W. Lonsdale Miller; Treas., Geo. H. Hathorn.

American Bronze Foundry Co., Chicago, Ill.; $10,000; Paul Cornell, Jr., Julius Bercham, J. A. Graves.

George D. Pohl Mfg. Co., Vernon, N. Y.; $20,000; to manufacture engines; George D. Pohl, Jenney R. Pohl and Henry Pohl, Ava, N. Y.; Adam Pohl, West Leyden, N. Y.; N. A. Tyler, T. G. Ingersoll and J. J. Bartholomew, Vernon.

Gold Point Hydraulic Mining Co., New York; $500,000; C. E. Aschenbach, John Lachner, A. A. Cryer, E. J. Grimm, New York; C. B. Lounsbury and C. J. Polleys, Elizabeth, N. J.; G. A. Morrison, Cranford, N. J.; C. A. French, Charleston, Mass.

Hudson Subway Co., New York; $5,000; to construct and maintain subways or tunnels to hold pneumatic tubes, gas and water pipes, and telephone and telegraph wires and cables; T. F. Lennon, Richmond (S. I.), N. Y.; Thomas F. Farrell and Walter J. Aims, New York.

Boise Dredging Co., Philadelphia, Pa.; $1,000; Herman Hoopes, H. W. Lippincott, Samuel S. Harper, E. A. Barber and Thomas B. Harned.

Tioga Foundry Co., Philadelphia,Pa.; $5,000; Samuel A. Kensil, Lewis T. Matlack, Walter A. Taylor, Jacob B. Blankley, Helen B. Way.

Caloric Reduction Co.; $100,000; to refine, smelt and mill minerals; Benjamin Frick and Edward Bolithe, Brooklyn, N. Y.; John R. Grew and Edward G. Johns, New York; Willis G. Hillman, Newark, N. J.

Texas City Co., near Galveston, Tex.; $200,000; to construct and operate deep water channels, operate dock and railroad tracks and furnish light, gas and water power; Benjamin Crane, Duluth, Minn.; Seth E. Tracey, Houston, Tex.; David H. Wilson, Texas City, Tex.

Metropolitan Electric Construction Co., New York; $50,000; Albert B. Chandler, Edward H. Johnson, William D. Macquesten, Edward C. Platt, Herbert T. Jennings.

John A. Lynch Wrecking & Contracting Co., St. Louis, Mo.; $2,000; John A. Lynch, Robert J. Lynch and John M. Willing.

Hart & Ayres Mfg. Co., Brooklyn, N. Y.; $15,000; to manufacture motors, etc.; Chas, Hart and T. G. O'Connor, of Brooklyn,; Paul Ayres, of Oceanside (L. I.), N. Y.

Simplex Engine & Machinery Co., Chicago, Ill.; $20,000; F. W. James, J. Francis Small and W. D. Sherwood.

Kellet-Chatham Machinery Co., Waco, Tex.; $50,000; to manufacture and repair machinery; W. M. Kellet, E. Rotan, W. R. Clifton and others.

Eden Engineering Co., New York; $5,000; James B. Lyon and A. C. H. Vermilyea, New York city; James A. Eden, Jr., Elizabeth, N. J.

Reid Brass Mfg. Co., Brooklyn, N. Y.; $10,000; to deal in plumbers' supplies; R. W. Reid, P. J. Mount and T. C. R. Rossfield, Brooklyn.

American Iron & Steel Co., Troy, N. Y.; $2,000; John E. Gaitley, David H. Friedman and Frank White, Albany; and John Robinstein and Benjamin E. Porter, Philadelphia.

Edwards Sad Iron Co., Camden, N. J.; $100,000; to manufacture implements of metal; Thomas Cross Edwards, Joseph L. Harbinson, Harry L. Day and George M. Thomson, of Philadelphia; and James Finley, of Camden.

Insulated Clay Conduit Co., New York City; $10,000; Ellis R. Meeker, Elizabeth, N. J.; J. C. Gilbert, 180 Lefferts Place, Brooklyn, N. Y.; and T. H. Thomas, of New York city.

Chicago Gilsonite Paving & Construction Co., Chicago, Ill.; $200,000; incorporators: Frank J. Decke, L. L. Loehr, Max Whitney.

Monongahela Filtration Co., Pittsburg, Pa.; $5,000; to manufacture water filters; Henry Myers, Philadelphia; Dell A. Herrick, Ravenna; Frederick English, Paul E. Cash, George Gallwitzer, Pittsburg.

Weisel Acetylene Gas Machine & Mfg. Co., Crestline, O.; $5,000; Jacob E. Weisel, C. F. Talbot, John G. Barney, Jacob Babst, Nicholas Amos, Charles E. Trimble, H. E. Bosmuth, Frank Miller.

Newark Asphalt Paving & Construction Co., Newark, N. J.; $24,000, with all paid in; to construct all kinds of streets and roads; John Illingworth, William Paul, Jr., Jas. F. Connelly and George MacDonald, Newark; James J. Croghan and C. G. Boland, of Scranton, Pa.

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